

PERSONAL

I must be the world's most reluctant complainer. If I am served cold soup in a restaurant I just close my eyes, pretend it is gazpacho, and swallow the wretched swill. I am the sort of customer school dinner supervisors pray for, cheerful sprinkling grateful Alka-Seltzer over the spaghetti as if it were parmesan, just to keep the peace.

I was, however, so incensed at the *Panorama* programme "Good enough for your child?" that I actually complained vigorously to the BBC. The programme about the MSC 14 to 18 scheme was based largely on the prejudices of the clientele of the saloon bar at the Dog and Partridge, and was the sort of stuff that gets crap a bad name.

Now don't get me wrong. I have nothing against a crowd of dilettantes, who probably think CSE is the Co-op, sounding off and pretending they are experts. After all that sort of thing happens in the House of Commons every day. A teacher-bashing show is clearly safer than their brain death programme on doctors which brought the medical establishment down on their like a ton of bricks, and more fun than 50 minutes of Wohlhechops Whiteclaw rabbiting on about Laura

Norder. What I object to is that the programme was meant to be serious, and the people who made it were presumably paid in real greenbacks rather than given a bag of rusty washers.

The tone of the show was clear from the outset, with the presenter informing us that the Prime Minister had singled out state education as "a disaster". The sad truth of the matter is that Miss Piggy regards the whole human race as a disaster, and sees herself as a nurse ordaining from above to force feed it with eator oil, but that is by the way.

Fortunately, the BBC tells me that the programme was in fact a pilot for a *Not the Panorama Programme* satirical series starring Rowan Atkinson as Richard Lindley. They have kindly provided me with a transcript for those who missed the show.

"Good evening, viewers. No less an authority than my Uncle Bert once described education as a load of old cobbles, a massive indictment by the British people of our riot-torn state schools, so let's start with cliché number one, the angry parent. Tell me Mrs Ramshoton, your Mavis got 3 per cent in her maths mock exam, so why are you



Ted Wragg

utterly furious, livid, scandalized and disgusted that she has been entered for CSE instead of O level?"

"I'm utterly furious, livid, scandalized and disgusted."

"You see viewers, parents up and down the country reject the CSE, and at this point I am going to fail to mention that grade one CSE is equivalent to O level grade C because it would spoil the fun. For those teachers wondering how many million upset and by now thoroughly misinformed parents will be hammering on their door tomorrow morning, I can only say tee bloody hee."

"Let's move on to cliché number two, the disaffected pupil. I am now going to ignore the national statistic that 98 per cent of pupils do not play truant, by pretending that most do. Tell me Darren, why have you bunked off from school to smoke, sniff glue and mug people? Would you say it's boring isn't it?"

"It's boring, luv."

"A massive indictment by Britain's youth of all teachers, state education, progressive primary schools and CSE, whatever that is. Now I'll just show you a critical piece of film made in 1945 about the virtues of chanting Latin verbs in the grammar school, and then we'll move on to cliché number three, which is to pretend that schools do no vocational or technical education at all. Let's now argue, therefore, that kicking some of the thicker yobs out into work would solve all our ills. Tell me Wayne, you've been slicing a ton and a half of liver in this café for the last fortnight, I bet it beats school."

"It beats school."

"A massive indictment by Wayne and his fellow yobs, most of whom would prefer to slice liver rather than chant Latin verbs or whatever they do for CSE. Now let's talk to

David Young of the MSC who has so much money he doesn't know what to do with it. How did you get your fantastic idea, whatever it may be?"

"Well, I was on a no-passport, duty-free Awayday trip to a Calais supermarket when I had the brilliant inspiration of going round Britain minivanning 'computers' or 'micro-electronics' for no apparent reason. Errrrrrr me while I just put this peasant on the head and give him my patronizing smile."

"Finally, let me turn to the Secretary of State for Education, Lord Python of Bedlam. Minister, tell me, will David Young's scheme work?"

"Work, I faith? Calloo, Calloo, oh frabjous joy. Alas poor Yorick, I knew him, Horatio. He is my first forsooth."

"A massive indictment of who cares what the minister himself. Next week your blinkers on the world programme gives an indecent account of the church entitled, 'The Bishops who hate God'. We apologize to viewers for the occasional noise during the programme. It was Richard Dimbleby turning in his grave."

THE TIMES

Educational Supplement

Sir Keith tries to keep new exams nuclear free

by Nick Wood

Keith Joseph, the Education Secretary, is trying to ban questions and science exams which touch controversial issues raised by topics as nuclear weapons and the power.

He move comes just days after TES exclusively reported plans for a CSE exam on the threat of nuclear war.

It contained in his reply to the House of Commons that the new exam at 16-plus, which has rejected submissions from the CBI, the Association of Industrial and Commercial Unions, and the Institute of Physics, specifically embraced the wider implications of the subject.

In a detailed reply, Sir Keith also wants a compulsory practical exam for all physics candidates, more emphasis on the technological aspects of the subject such as microelectronics, more marks given to scientific methods at the expense of knowledge, recall and understanding, and an unequivocal commitment to a range of exam papers graded according to difficulty.

Sources close to the council could scarcely conceal their dismay. One said the measure would put the whole project back two years if he took a similarly tough line with other subjects.

But the official statement, released this week, was diplomatically couched: "Sir Keith Joseph's letter to the two joint chairmen raises several major questions of principle, procedure and cost for the joint council and the exam boards."

L.e.a.s. are poised to offer 4.9% on pay

by Richard Garner

Local education authorities are expected to offer teachers a 4.9 per cent rise - £7.80 a week on average - when salary negotiations resume next Friday.

The management side acknowledges privately that it is likely to be strongly influenced by the size of the impending teachers' pay settlement in Scotland, where the unions and employers are haggling over 0.1 per cent (£8 a year on the average Scottish salary). The employers have offered 4.9 per cent but the unions have said they will not settle for less than 5 per cent.

A 5 per cent award would increase the average initial salary of a teacher in England and Wales from £8,132 to £8,539.

Teachers on the bottom rung of the pay ladder, who currently earn £4,932 a year, would receive an extra £247, or £5.74p a week. Head teachers earning the highest salaries would find their pay increasing from £20,793 a year to £21,842 - a rise of just over £20 a week.

The further education Burmah management panel met the unions this week in the first round of what are expected to be protracted negotiations to settle this year's pay claim. *Diane Spencer writes.*

The 73,000-strong college lecturers' union, NATFHE, is claiming £280 plus 12 per cent. This would increase the salary of a lecturer on the top of the L2 scale from £10,173 to £11,707.

How Kathy blossomed in China

Meet Kathy Flower, the most famous teacher in the world. For her classroom was the People's Republic of China - all at it - and her students numbered anything up to 150 million, all slavish scholars of the English language.

Kathy, 31, was sent to China by the British Council to provide foreign expertise to the country's Television University. While she was there China bought the BBC's series, *Follow Me*. She was the obvious choice to adapt and present these programmes.

The programme was a smash hit, with crowds gathering around the country's 20 million screens, in factories and on communes, at peak viewing time, carefully mouthing each sequence.

During the day students practised what they had learned. "You would hear two people on a bus or a park bench, or one person with a tape recorder practising the dialogues from the programmes," Kathy said. "There's no equivalent in Britain. It's like 57, or disco-dancing."

Kathy rapidly became famous in Peking. "Hello, Flower," students would greet her.

Now Kathy has returned to Britain to help produce the follow-up series to *Follow Me*. But she has not left all her fame behind in China. Viewers in this country saw her cycling around Peking in a documentary about the BBC World Service.

Hilary Wilce



Resources/Media

Susan Thomas on a new BBC course in computer studies; Ann Stuart on 25 years of zoo education (picture right); reviews of *Tucker's Luck*; children's video programmes and a do-it-yourself series. 36-38

EXTRA

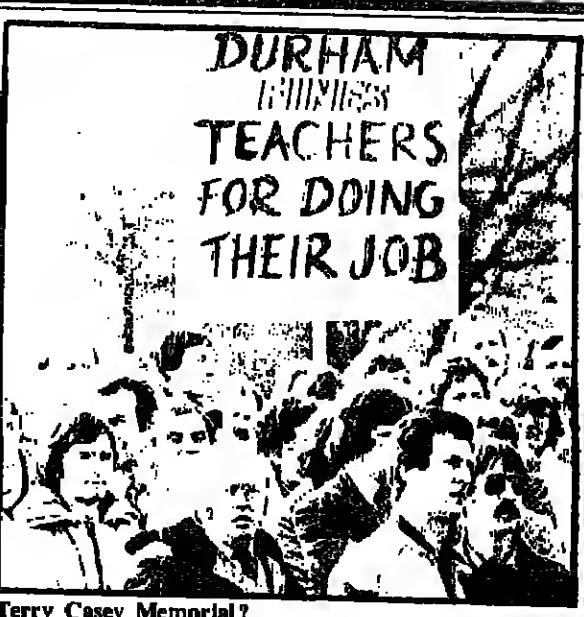
Science: Why, how and what should be taught? 12 pages of curriculum suggestions, different teaching approaches, interviews and book reviews 43-54

Terry's farewell is so long

With Sir Keith Joseph opening a Terry Casey Memorial Library last week (at the NAS/UWT Education Centre at Rednal) the part of Terry Casey farewells is hotting up. My Terry Casey Retirement correspondent reports that things began pretty quietly, one year ago, at the Secondary Heads' Association conference, where tribute was paid to Mr Casey's doctory work.

Over the months glasses were raised to the retiring general secretary of the NAS/UWT at other conferences. But the first major party took place at the House of Lords four weeks ago when Lord Tom Taylor gave a dinner for education-minded MPs, peers and ex-ministers. (No prizes for guessing which ex-Secretary of State did not attend.)

The MPs then went on to a merry debate on the Assisted Places Scheme (quote from Hansard: Mr Neil Kinnock: "The Under-Secretary has had a good dinner". Dr Boyson: "I hope the Hon. Gentle-



man has also had a good dinner...").

Casey's parting shot to the NUT was less convivial. As we reported last week he wrote to Fred Jarvis, his NUT opposite number, saying the NAS/UWT would never work with the NUT again (copy to Len Murray).

It's safe to predict that this year's Easter conferences will be awash with Terry Casey tributes. The NAS/UWT Easter conference is



supposed to be his final final appearance. Meanwhile, this week Terry Casey was up in Durham.

It must have been a nostalgic visit. Durham is the place where Terry Casey won his - and his unions - spurs in the great lookout 12 years ago. Teachers there started a work to rule in protest about covering colleagues' absences. The council replied with a lookout, and battle was joined.

Just across the border in Teesside there was another historic Casey engagement when Mr Joe Faye, an NAS officer, did not get the job of deputy at the Sacred Heart school.

The visit this week was something of an action replay. Terry Casey was once more addressing his striking Durham members, who were once more protesting about covering absences, and the council's response which was to clock their reply.

No doubt this will go down in the union's history as the First Terry Casey Memorial Strike.

Listening post

One hundred or more angry teachers from all over the country came to a wake at the London Institute of Education last Saturday. They were mourning the Schools Council Language for Learning project, cut down just as it was reaching maturity in the Schools Council massacre.

They represented both primary and secondary schools, and many subject disciplines. The project started in 1980, when Professor Harold Rosen from the Institute and Jean Bleach, were given £45,000 to encourage teachers to investigate the importance of talk (both teachers' and children's) in learning.

On Saturday they discussed the enormous amount of work that had been done under the project's auspices, and set up a group to make sure some of it carried on. Luckily, the project was far enough advanced for this to be possible. But as the Schools Council's Maurice Plaskow said, it takes a strong central push to get this kind of teacher-based work going.

One irony is that a common complaint in the newly-published HMI reports on secondary and tertiary education is that children are not given enough time to work out their ideas by talking about them.

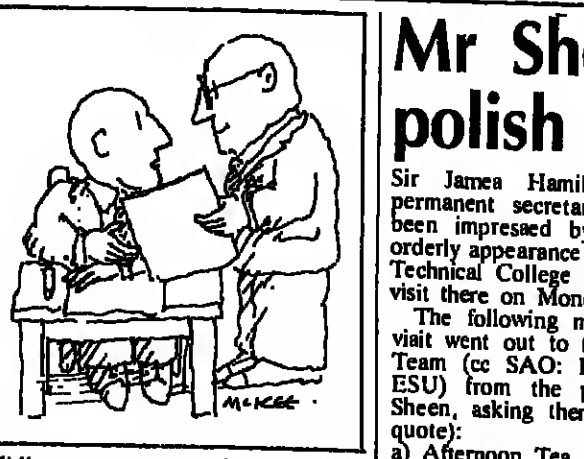
Bemused by Brentspeak

The brothers and sisters of the Left-Labour controlled London borough of Brent are really getting the bit between their teeth, if the minutes of the education committee are anything to go by.

One of their recent decisions was that "the date 1995 should be deleted from the minutes and all future documents." No reason was given. Another, on a consultation paper on patterns of secondary education, was to "delete the sentence: 'we want your views'."

They are clearly trying to keep the decisions properly collective: on one of their papers it was agreed that they should "delete 'I' and insert 'The Working Party'."

However, their enthusiasm is clearly causing some difficulties. At the last education committee meeting the council's director of legal and administrative services asked if members could give some guidance as to the relative priority they attached to the 50 or so reports they had requested from council officials.



HMI reports, reports of HMI reports, reports on reports of HMI reports. Where will it all end?

Mr Sheen's polish

Sir James Hamilton, the DES permanent secretary, should have been impressed by the neat and orderly appearance of Peterborough Technical College on his two-hour visit there on Monday.

The following memo about the visit went out to the Management Team (cc: SAO: Head Caretaker: ESU) from the principal, Paddy Sheen, asking them to arrange (1 quote):

a) Afternoon Tea
b) Extra Cleaning 15.30 to 16.00
c) Suggestions as to areas to be visited (avoided?!!!!)

ting, cake-making, make up, and looking after baby... The pictures show that they are designed to help young women to organize domestic matters for the greater comfort and pleasure of the male.

Italian, Spanish and Arabic rights have been sold, but M. Chancelier concedes that Britain and America are more difficult potential markets. He seems to think their resistance has something to do with the strip format.

No 92 CROSSWORD by Rufus

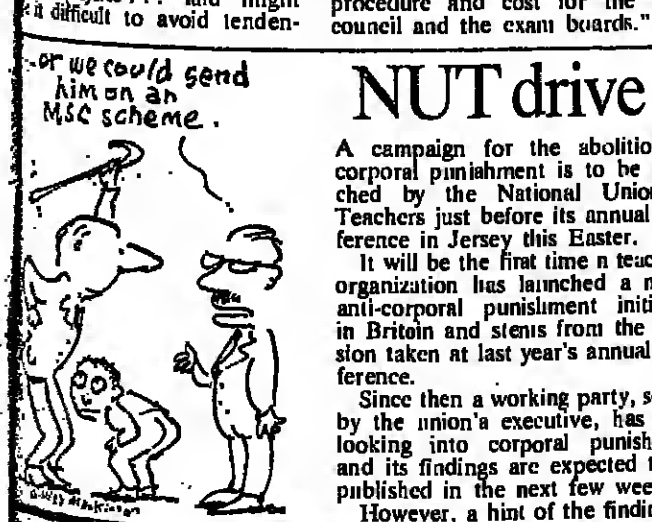
Across

1 A concentration of intelligence (4,7)
9 Having our nose put out of joint is hard to bear (7)
10 Animal arrived, then left (5)
11 Tax on goods and services (4)
12 Imposing corporal punishment (8)
14 A speaker who is skilled at quelling altercations (6)

Down

2 Pass out of college (7)
3 Push sort of business (6)
4 Overturn and get into a bad temper (6)
5 Superior neighbour in the U.S. (8)
6 Charging for a sign on pottery (7)
7 It's nice to be in such a successful firm (3,3)
8 Courses in aviation (6)
13 Full make up? (8)
15 There's no place for him (4,3)
17 This form of cure is sometimes recommended by doctors (6)
20 Once more a profitable deal (5)
21 Turns up some hints for cooking (6)

Solution to puzzle no 91



Secondary slide

Research on the effects of school size on the half

Other half

Secondary pupils are providing half the intake next year.

Other northeners no longer apply.

NUT drive against the cane

A campaign for the abolition of corporal punishment is to be launched by the National Union of Teachers just before its annual conference in Jersey this Easter.

It will be the first time a teachers' organization has launched a major anti-corporal punishment initiative in Britain and stems from the decision taken at last year's annual conference.

Since then a working party, set up by the union's executive, has been looking into corporal punishment and its findings are expected to be published in the next few weeks.

However, a hint of the findings is given this week in the union's annual report, which says the NUT will campaign for corporal punishment to be abolished and be replaced with "more acceptable forms of sanctions".

The working party found that many L.e.a.s. had successfully concluded negotiations with their teachers about the phasing out of corporal punishment.

The NUT's annual report says that the union has already asked Sir Keith Joseph, the Education Secretary, to bring in a ban. He is seeking legal advice on the topic.

THIS WEEK

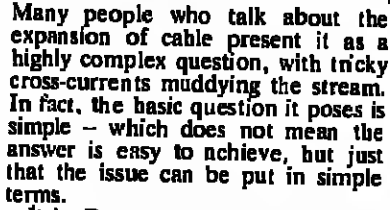
| | |
|-----------------------|--------|
| COMMENT | 2 |
| PRIMARY | 11 |
| SPORT | 14 |
| SCHOOL TO WORK | 15, 20 |
| OVERSEAS NEWS | 21, 22 |
| LETTERS | 39 |
| ENDPAGE | 46 |
| PERSONAL, PARIS DIARY | 40 |
| AND CROSSWORD | 43-54 |
| CLASSIFIED | 40 |



PLATFORM

John Robinson (left) considers two options of cable network expansion and warns that we must speak now if we want a coordinated system.

Cable twists: short-term gain or long-term vision



Many people who talk about the expansion of cable present it as a highly complex question, with tricky cross-currents muddying the stream. In fact, the basic question it poses is simple - which does not mean the answer is easy to achieve, but just that the issue can be put in simple terms.

It is: Do we want a national/local system of electronic communication, for personal, industrial, social and community use, so we can flourish as a society amid the technologies of the early twenty-first century? Or do we want a few selected urban areas to have a wider choice of home movies and similar entertainment, with a bit of local news thrown in? If we choose the former, it means a national development plan for cable technology, as France and West Germany have already virtually decided, with national coordination of installation and operation, and with adequate resources and training support for local involvement.

If we choose the latter, we can leave it to the entrepreneurs to provide a scatter of local systems, geared to short-term financial return. The entrepreneurs will not provide a national network and a national plan is not necessary for a scatter of local provision.

That is what the cable debate is all about, and it is not a complex question. If we call the options Choice A and Choice B, many people would be satisfied with Choice B, a modest extension of television entertainment, though unevenly available according to where we live. But many of us would prefer to consider long-term and universal needs - as the tradition of public service (with all its faults) has normally done. And that means Choice A.

If we do believe that, we shall have to say so loudly and clearly. The most interesting question for the Government will be how far it has moved in the direction of Choice A from the proposals so far made by Ministers and from the terms of reference implied in Lord Hunt's inquiry.

There were signs of a definite movement during the autumn, not least in the Home Secretary's statement in the Commons on December 2. But there are also still alarming signs that we shall get a patched up version of Choice B. And that means it will be much more difficult to move towards a national system. Once again we shall be bogged down with an obsolescent technology while our European neighbours are planning for the future.

In that case, all the recommendations about franchise criteria, "must carry" clauses, non-exclusive rights, community access and electronic locks will be important, but quite secondary considerations. We shall have an out-of-date system geared to privileged areas of the country only.

If we wish to campaign for a national system, we must insist on three important requirements of any cable expansion:

- 1 That it be available to as many people as possible, reaching them by planned stages, in Devon and Cornwall and Norfolk and Cumbria, in the Scottish Highlands and outlying islands, in mid-Wales and Northern Ireland, as well as in London and Glasgow and Birmingham. This would be following the customary policy of broadcasting in this country.

- 2 That it carry as many channels as possible and have access to all possible sources of information, so that it can be used for domestic and busi-

ness information, for research and education, and community education, as well as for news and entertainment.

- 3 That it be as interactive as possible, at every individual terminal, to encourage participation rather than passivity.

These requirements mean a national authority, to coordinate development and minimize costs; and a fibre-optic system to provide the optimum facilities. It should provide scope for genuine local diversity, with widespread personal and social access, as Raymond Williams and Richard Hoggart and other writers have argued; and the best guarantee of such diversity is a national network of local systems, using the most advanced wide-band interactive technology.

It has been objected that we can not afford such a system. In that case, we should not go ahead until we can afford it. What we should not do is to clog up the works with a half-baked mix of co-axial cables which will make it much more difficult to develop a proper system later on.

And national coordination and fibre-optic technology are two areas in which we have particular exper-

tise in Britain, in which we are probably world leaders. It would be the height of stupidity to cripple these talents for a few short-term gains.

So what has caused this basically simple question to appear as such a complex one? Paradoxically, it is because the debate has been focused on one band of the spectrum of cable potential: its use for an extension of television broadcasting, and particularly of television entertainment. It has been assumed in most official statements that any likely development would be "entertainment-led". That was certainly accepted by the Hunt committee.

It is true that a case can be made for greater choice in television entertainment, particularly for groups in the community whose first language and culture is not English and for those who have specialized cultural interests. But there is widespread evidence that these special needs are being largely met by the home video industry; and that provision will become cheaper and more accessible with the growing availability of video discs.

There is no great enthusiasm among the specialist entertainment providers to press for the provision

of cable systems as well. The great entertainment-led boom in cable broadcasting is already looking more like a South Sea Bubble. And it is not looking very healthy in North America either.

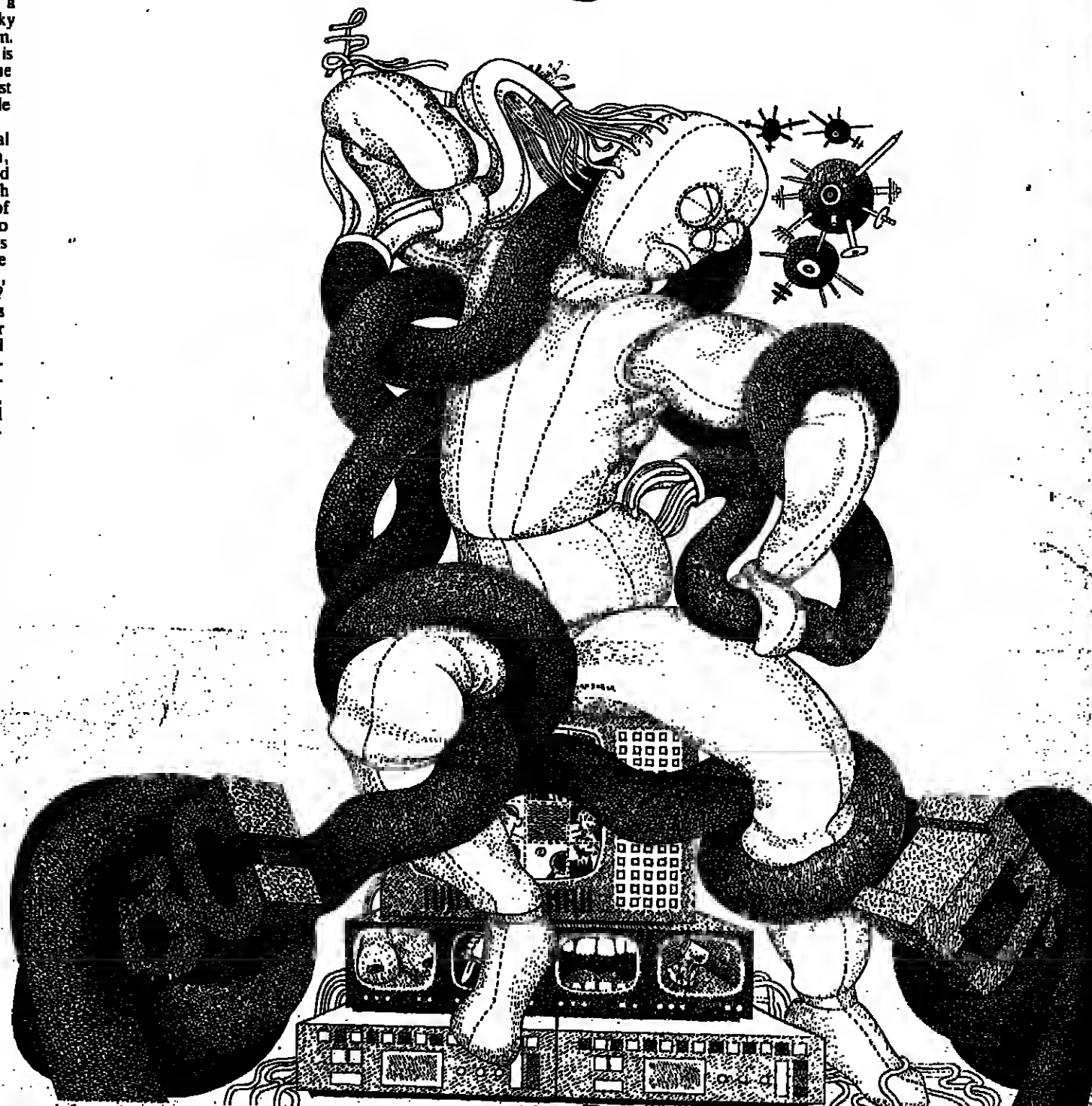
It was a strange approach in the first place, as Anthony Smith pointed out at a recent cable conference. It was rather like saying we would allocate our entire national stocks of paper to Fleet Street and the paperback industry. No paper for personal records or private letters; for industrial or commercial use; for education or social services; for local government, voluntary bodies or community activities. To use up cable systems mainly for packaged news and entertainment would be substantially to prevent its use for all these other vital purposes. What a grotesque waste of technology.

The particular value of an interactive cable system for educational and training purposes was clearly stated by the Council for Educational Technology in its evidence to the Hunt inquiry.

As the report of the Information Technology Advisory Panel states in paragraph 2.10, the increased bandwidth available in a cable system

will allow the interconnection of computer programmes, material, mailbox facilities, text transmission and the like. All these will be available to students learning at home or in the classroom, but can be provided only by a cable system as wide as the country, therefore, a cable network could provide a training "arrangement" as Rex Mallik wrote in the *New York Times* of December 2. "The cable network has been on television for a long time, but it is only now that Britain is about to cable it. Once the network is in place, it will be a very clear, very direct, very simple way to go on, very clearly, for there are no more issues, for the sake of the gain rather than long-term

John Robinson, Secretary of the BBC, in 1970s and his book on *Television and Adult Learning*. The *Air*, has recently published.



Wick Wood reports on the wider implications of the Reinstatement of Lionel Vida campaign. ILEA's race policy on the line



More than one man's future is at stake next Tuesday when the case of Lionel Vida comes before a full sitting of the Education Committee of the Inner London Education Authority.

Supporters of Indian-born Mr Vida plan to picket the meeting. Mr Vida walked out of his job as a school studies teacher at Catford School in south London, in 1981, after being accused of racial harassment of himself and black pupils. A tribunal subsequently recommended that he be sacked. But the schools subcommittee later rescinded its decision and substituted a reprimand.

The Reinstatement of Lionel Vida Campaign, organised by the National Association of Black Teachers, has been a string of polemical clashes on his behalf, collected some 200 signatures of support, organised public meetings in the area and bombarded authority members with letters opposing his dismissal.

They are fighting for more than Mr Vida's reinstatement. His case is seen as a test of the authority's much-publicized £1m campaign to stamp out racial discrimination in the schools.

It is easy to understand why. Mr Vida has consistently claimed that his sole "crime" has been to fight racism among the Catford staff. For his part, he has been found guilty of "misconduct and indiscipline" on a number of trumped up charges. In other words, he claims to have been punished for trying to practice the authority's

Mr Vida's commitment to the fight against racial discrimination. There can be no doubt, though, that the school's methods. He is a member of Catford's national education working party, presenting it with lengthy reports on how the public examination and school policy work

The second report "Institutional racism, suspension and exclusion" presented to the working party three months before his dismissal, is a savage attack on the schools' treatment of black children. It is a common theme in other London schools, victims of the "battering" of black pupils by the headmaster, as the report states. (In Catford's case, this was subsequently refuted by Mr Vida, the headmaster, as the report states.)

Mr Vida's tone can be gauged by his extracts: "It is the specific nature of the attack by educational policy-makers at all levels of the authority, from the top down, to do one or a combination of the following: discriminate, harass, prejudice, provoke, disrupt, detain, 'cover-up', and many other things, central to blocking and denying the access of all school-

Not least in the formidable list of "misconduct" is the "deliberate use of exclusion, suspension and expulsion."

He also organized an after-school reggae club and a dance in aid of the victims of the "New Cross Massacre" (less tendentiously known as the Deptford house fire) both of which brought him into conflict with senior staff at Catford.

After the school-keeper complained about boys roaming unchecked through the school buildings, Mr Vida brought in new rules for the running of all school clubs. Mr Vida said he had been "forced" to close the club. He also protested about teachers expelling "gate crashers" at the dance which ended in a general melee with the police being called.

Mr Vida's anti-racist credentials and the wider implications of his case were summed up by his supporters to one of the leaders they have been distributing in the area.

"Lionel Vida is a committed anti-racist teacher who has attempted to implement the anti-racist policies of the ILEA since 1979. He has defended black and working class students against the racist denial of their rights to a decent education. This work has been conducted in the classrooms, on school premises, in working parties and committees, at social events, on the streets, in youth clubs, at union meetings and conferences, as well as at police stations; in court and at detention centres. His anti-racist work as a teacher has been repeatedly attacked again and again by racist authorities. He has faced inquisitions and interrogations at no less than six different kangaroo courts (ILEA disciplinary hearings) from February 1982 to November 1982."

When the recommendation of the ILEA disciplinary tribunal for Mr Vida's dismissal was discussed at last month's meeting of schools subcommittee, chaired by Mrs Frances Morrell, voting was on strict party lines. The majority threw out the recommended dismissal and ruled that Mr Vida be merely reprimanded and kept on full pay while another job was found for him. It is this which now goes to the full education committee on Tuesday.

The schools subcommittee decision infuriated the minority Tory group. They believe Mr Vida was spared for purely political reasons because Labour would find it highly embarrassing to dismiss him when he says his only offence is to take on the "racists" at Catford.

"It appears that if a black member of staff transgresses against the staff code he is less likely to be dismissed than if he were white," Professor David Smith, Tory leader on the authority, said.

Professor Smith believes that ILEA should stand by the decision of its five-member disciplinary tribunal which last November found Mr Vida guilty on four counts of misconduct, one count of serious misconduct and one count of gross misconduct.

Contrary to the impression created by his supporters, the schools subcommittee did not totally exonerate Mr Vida. Finding that "The punishment did not fit the crime" to quote one source, it substituted a reprimand with the prospect of reinstatement (though not at Catford) for dismissal.

NEWS

NUT tough stand on staff injured at cuts-hit schools

by Richard Garner

Cuts in education spending have led to more accidents and injuries to teachers and pupils in their schools, the National Union of Teachers, says in a report.

The outbreak in resources - which has included the withholding of financial provision for the repair and improvement of schools - has greatly increased health and safety risks facing teachers, the report says. It pledges full legal support for any member pursuing a claim for damages from a local education authority following injury.

During 1982, NUT staff took 115 cases of teachers suffering injuries to the school to court, winning damages ranging from £150 to more than £10,000.

The figure represents a rise on previous year. The union's legal department has seen a steady upward trend in the number of accidents in schools during the past few years, since education cuts began to bite. Cases include one involving a teacher who was seriously injured when the staff toilet collapsed, and two of water weakening a classroom ceiling causing it to fall in. In addition, accidents resulted from defective window sashes, a venetian blind collapsing and a water heater exploding.

Injuries ranged from bruising, where teachers received awards of between £150 and £200 - to more serious accidents which in some cases have led to awards of up to

five figures sums. The legal department stresses that the 115 cases taken to court were not just accidents in the sense they were unavoidable, but happened because of some degree of negligence by local education authorities, in failing to repair or maintain school equipment or buildings.

In one of the worst cases, a teacher was awarded £7,000 damages after suffering a spinal fracture when falling on a slippery floor - which had been the subject of several previous complaints. In one case where a toilet collapsed, a teacher had to undergo an emergency operation and was off work for several weeks.

Call for industry links

Education chiefs are being urged by Sir Keith Joseph, Education Secretary, to improve links between school and industry.

In an unusual move, he has written to chief education officers recommending that they should give a member of their staff full-time responsibility for fostering school/industry links.

Sir Keith's initiative stems from recommendations of the Cooper report on the relationships between school and industry carried out in 1981.

Education authorities should cooperate closely with their local Sci-

ence and Technology Regional Organization and take advantage of new incentives to second mathematics teachers to industry, he said. "It is a major function of the schools to prepare all young people, at each level of ability and attainment, for adult and working life," he said.

Officers were reminded of initiatives taken by the DES to improve links: the pilot scheme for technical and vocational education for 14 to 18s due to start in September, the proposal for a Certificate of Pre-Vocational Education and the projects for lower-attaining pupils costing £2m which will also begin in September.

Warning on libel to the media

The National Union of Teachers' legal department is issuing a warning to the media that it will take "all appropriate steps to defend and safeguard teachers against libels and slanders".

A report of the union's law and tenure committee says there is a great tendency to lay the blame for stress within the education system on serving teachers. It adds: "Often this grossly unfair criticism is designed to turn attention away from the real stresses and strains within the service."

Durham steps up cover strike

Teachers in Durham stepped up their strike action this week over the Labour-controlled county council's decision to dock the pay of union members who refused to cover classes for absent colleagues.

Members of the National Association of Schoolmasters/Union of Women Teachers in six county comprehensives and two primary schools went out on strike for three days this week - affecting the education of more than 7,000 children.

However, teachers in the comprehensive agreed to provide "emergency cover" for fifth and sixth-formers taking examinations.

In addition, NAS/UTW representatives at the county's 43 other comprehensive and a total of 16 primary school representatives were called out on strike on Wednesday morning to join their 250 colleagues on three-day strike in a lobby of councillors.

Sikh boy's new school

The Sikh boy who was banned from a sixth form college for wearing a *Kirpan*, a symbolic dagger, has been admitted to a Roman Catholic school.

St Paul's School, Leicester, has permitted Davinder Singh to wear the *Kirpan*, which Wyggeston and Queen Elizabeth I College refused to accept.

Monsignor Peter O'Dowd, chairman of St Paul's board, said that Davinder had been admitted to the Roman Catholic school as an individual Christian act.

Mr Kartar Singh Sandhu, chairman of the Sikh Education Committee, Leicester, and a teacher at St Paul's School, said the Sikhs would never-the-less continue to fight for the principle that a Sikh boy should be permitted to wear the religious symbol of his religion.



to attend a

NATIONAL COURSE CONFERENCE

on FRIDAY, SATURDAY, SUNDAY
28th, 29th, 30th OCTOBER 1983

at THE BELFRY CONFERENCE CENTRE
MILTON COMMON, OXFORD

"COMMUNICATION: SUCCESS OR FAILURE?
- a look at Language Development for the Whole Child"

COME AND HEAR:

Professor DAVID CRYSTAL Head of the Dept. of Linguistics
Science at the University of Reading on LINGUISTICS.

JOHN RICE Literature Officer for South East Arts on
CREATIVE USE OF LANGUAGE

CHRISTOPHER WALKER lately of Manchester College of
Education - well known author of Children's books - on
EXTENSION READING.

RONALD THREADGALL Head of Remedial, Clacton High
School, on "TURNING FAILURES INTO SUCCESSES"

PLUS: AN EXHIBITION of Books and Teaching Materials:
FILM SHOW on "The Shakespeare Land"

Full Residential Rate - £69.50 Inclusive
Non-Residential from £26.35

** Full-time students: Rate £53.50

INTERESTED? If so, please send for
a Conference Brochure
and full details from

The Conference Secretary, UK I.L.A. Federation

24 Broad Oak Way, Rayleigh, Essex SS6 8JU

Sponsored by

UK I.L.A. FEDERATION



NEWS

DES to control more local funds

by Sarah Bayliss

Major schemes being run by the Manpower Services Commission and the Department of Industry could be taken over by the Department of Education under new legislation announced by the Government this week.

The new law, which should be on the statute book by late spring next year, will allow the DES for the first time in 25 years to channel government funds into specific areas such as technical education, provision for the 16 to 19s and computer-assisted learning.

The decision to grant the DES more control over local spending through the payment of specific grants was forecast in the TES last November. A new Bill is already being drafted and it will be put before the next session of Parliament whether or not an election has been called with the idea that the scheme should start from April 1985.

Sir Keith Joseph, Education Secretary, said he has taken account of a recommendation from the

Commons Select Committee on Education last spring that the DES should have the ability to fund directly important new developments on a temporary basis.

The proposal which was rubber-stamped last week by the cabinet committee on home affairs, Committee H, met immediate criticism from the local authority associations which had not been consulted beforehand and from the National Union of Teachers. Their complaints were that no new money was being made available and secondly that yet again local autonomy was under attack.

In a draft outline of the scheme the local education authorities learned of the Government's intention to set aside for use on specific grants up to half a per cent of the amount allocated for education spending. Grants from the DES would be paid at the rate of 70 per cent with local councils meeting the remaining 30 per cent.

Education spending is now about £10,000m; if the scheme went ahead

now, roughly £50m would be set aside for special projects, £35m of which would be paid in specific grants with £15m being met by rate-payers.

The Education Secretary would select several areas which he wanted to encourage and considered national priorities and the local authorities would be invited to make bids.

Mr Fred Jarvis, NUT general secretary said of the scheme: "It's wrong to clawback money already allocated to councils and then expect them to compete for it afresh. Teachers could think of lots of special projects needing extra money but this scheme won't offer children an extra penny."

The incentive to applicants will be the high rate at which grants will be paid - 70 per cent compared with 53 per cent which is the proportion of spending currently met by rate support grant.

Sir Keith's proposal reflects the frustration of successive Education Secretaries over their powerlessness to direct money into areas they con-

sider important.

Increasingly the DES has seen the Manpower Services Commission encroaching its education and training territory and it is the Department of Industry which has pioneered the programme for installing computers in schools.

The DES appetite for specific grants was whetted last year when it discovered a power - overlooked for 20 years in the 1962 Education Act - to make grants for in-service training worth £30m over the next three years. They will continue, as will urban aid grants and "Section 11" money for ethnic minorities totalling £100m.

The examples cited by the DES as suitable for the new grants are curricular changes in mathematics after the Cockcroft Report; more practical education for the less academic and the supply of microelectronic equipment for the severely physically disabled.

Most significantly, the DES says the Technical and Vocational Initiative, run by the MSC for 14-18s could be "built on".

In brief

Scholarship loophole closed

The Chancellor has closed a loophole whereby companies offer tax-free scholarships to dependent schools to the detriment of their employees. This Budget comes after a House of Lords decision in December which ruled that scholarships paid by ICI to the direct of two employees for research income tax.

A number of companies, including Barclays Bank, offer similar scholarships for education at private schools. The ruling means that one earning over £5,500 a year, existing scholarships are unaffected.

Meals scrapped

Conservative-controlled council has gone ahead with plans to become the first education authority in the country to scrap the school meals for primary and secondary schools. The £1.7 million cut in the council budget will scrap the meals and allow cleaning by private firms and restrict speeding in the area.

PAT gets a seat

The Professional Association of Teachers, whose 22,000 members are pledged never to strike, have been granted a seat on the Advisory Committee on the Supply of Education of Teachers.

'Drop action' call

The National and Local Government Officers' Association, which represents town hall staff, is urging members to call off their dogs in action over threats to cut allowances and accept a "no" vote from local authorities.

Appeal to PM

The Prime Minister is being urged by the National Union of Teachers to delay any decision on school loans until there has been an open debate on the issue.

Gays in protest

Gay rights activists are planning to lobby the National Union of Teachers' national executive committee in protest over this year's annual conference being held in Jersey, where all male homosexuals are illegal.

HEC expansion

The Health Education Council is expanding its school projects to cover the 16-18 age group. Topics will include smoking, alcohol, personal hygiene, sex education and using the health service.

'War plans' attacked

An appeal for teachers to join a civil defence team has been condemned by Mr Charles Giddens, secretary of the North Warwickshire NUT, who said that the county was "planning for war" in asking parents and maths teachers to lead the skills to the team.

Community call renewed

by Paul McGill

Mr Nicholas Scott, Northern Ireland minister responsible for education, has relaunched his campaign for more emphasis on community relations in the schools.

At the Irish National Teachers' Organization conference at the weekend, he stressed the role of education in fostering greater respect and understanding between the communities in the province and paid tribute to enlightened individuals who were already involved in this work. He argued however that "this is such a basic and fundamental matter affecting the nature of our society that its development cannot be left to chance or the commendable commitment of the few".

The minister's message was welcomed by Mr Gerry Quigley, INTO general secretary, but it was far from being a priority among the delegates.

Mr Danny MacAllister, chairman, set the tone, deploring the fact that a teacher with 14 years service earned less than the average industrial worker and condemned the "scandalous" situation of more than 1,300 teachers being without permanent jobs. One of the guest speakers, Dr Edward Daly, Roman Catholic Bishop of Derry, gave strong support to this by making an appeal for more teachers, especially in deprived areas.



The Princess of Wales accepts a gift from a Baring primary pupil, watched by the head Derek Attwell.

Red tape reminder for Royal visits

by Nick Wood

London heads have been warned that they must go through official channels if they want to invite top people to their schools. Failure to do so will result in permission for the visit being withheld, the Inner London Education Authority has said.

The authority's clampdown came after Mr Derek Attwell, headmaster of Baring Primary School in Lee, south London, cut through red tape and wrote directly to Buckingham Palace to invite the Princess of Wales to his school.

Princess Diana visited the school

on Tuesday accompanied by Mr Neil Davies, ILEA chairman and its titular head, who had to hastily reschedule his engagements to act as her host.

Mr Davies said there had been consternation at County Hall when it was learned that Mr Attwell had succeeded in bringing the princess to Lee. Her visit followed the discovery by Mr Attwell that the school was named after a man who had links with the princess's family, the Spencers.

"We were shocked and horrified at first. But Mr Attwell has pro-

duced the right results, so we forgive him."

The circular reminds heads to first contact the awesomely named EO/ER/GP3/4 unit at County Hall before bringing members of the Royal Family, reigning monarchs of foreign states, presidents of republics, ambassadors or the archbishops of Canterbury or York into their playgrounds.

Mr Attwell said: "When Buckingham Palace wrote back to me and said visits would be possible, I had to keep it secret for a month."

Appeals won

One in three parents in England successfully appealed under the terms of the 1980 Education Act against the allocation of a school place for their child last year.

In answer to a written question in the House of Commons Sir Keith Joseph, the Education Secretary, said that 9000 parents had registered appeals because they were dissatisfied with the place allocated to them. Some 3000 were successful and got the school of their choice on appeal.

Women set for new deal in NATFHE

by Diane Spencer

Important rule changes to guarantee women more places on key committees will be put before delegates at the annual conference of the 73,000-strong college lecturers' union at Blackpool in May.

But they are likely to be shelved for a year. Proposals from the National Association of Teachers in Further and Higher Education's Northern region include reserving places for women on the National Executive Council, ensuring that re-

gional committees' membership reflects the proportion of women members and, if necessary, co-opting women for delegations to outside bodies.

Mr Ray Grace, regional secretary for the North, said: "We need to get debate going on this issue: the more open the debate at the conference the better."

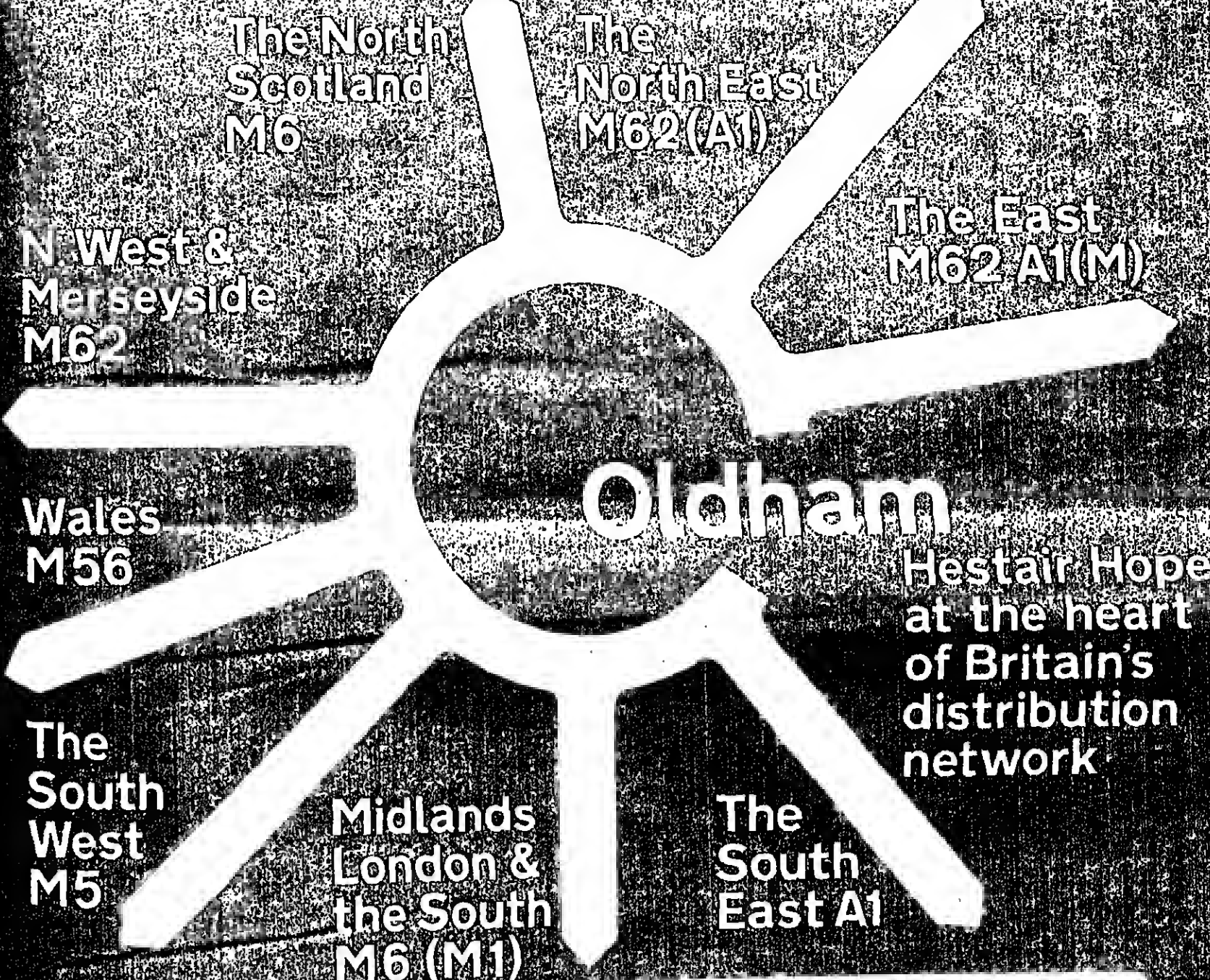
The executive has agreed to a proposal from the women's rights panel that a working party be set up

to look into the whole strategy of increasing the participation of women members.

To avoid the North's rule change proposals being rejected on the other hand, the NEC will propose they be remitted.

Eleven out of 14 regional thought to be fairly hostile.

They can then be shelved at the National Council meeting in November and a new package presented to the 1984 conference.

Free Carriage
Fast Delivery

Hestair Hope
at the heart
of Britain's
distribution
network

Hestair Hope—setting new standards.

- Free carriage on all orders for delivery in the U.K.
- No minimum order value.
- With our extensive warehousing and distribution, every one of our 8,000 products reaches you as fast and as efficiently as possible.
- We have the largest transport fleet in the industry delivering direct to your doorstep.

Hestair Hope are committed to setting new standards of service - and that can only mean the best for you!

Hestair Hope

Hestair Hope Limited, St. Philip's Drive, Royton, Oldham. OL2 6AG Telephone: 061-652 1411 Telex: 666515

THE COLLEGE OF
PRECEPTORS

Incorporated by Royal Charter 26th March 1878
invites applications from those engaged in education for

TWO NEW CLASSES OF
MEMBERSHIP

Member (MCollP) to recognise good professional practice in a tangible way.
Ordinary Fellow (FCollP) the senior class of College Membership reserved for those who have made an outstanding contribution to education.

The College of Preceptors is an Examining Body and a Teachers' Society which has Members throughout the world.

For a copy of the Membership Guide, please contact:

Chief Administrative Officer
The College of Preceptors
7 Ridgmount Square, London
WC1E 7AE
Tel 01-636 0286

The Inspectorate takes to the hills but finds the experience disappointing

Outdoor pursuits centres receive qualified approval

by Virginia Makins

Some pupils may be travelling more than 100 miles, or spending a week at expensive residential centres, to do work that would better be done in their own school neighbourhoods. HM Inspectors report in a survey of outdoor residential education called *Learning Out of Doors*.

But with careful preparation and follow up, and good liaison between school and centre staffs, outdoor centres contribute a great deal both

They found a huge variety of staffing arrangements and accommodation. Some centres had good teaching resources on site where others had very few; some had excellent links with visiting schools, while in others liaison was more tenuous.

Work done by children varied from excellent to trivial - often depending on previous preparation. Some children had had no training in basic skills, such as map reading and observation, and this limited the potential of work at the centre. Some centres allowed children too little scope for planning and decisions, and some did not even give them maps and compasses.

In the centres for field studies, the work was more likely to be productive where it was seen as an integral part of a course at school, normally in art, geography and biology.

Some of the outdoor pursuits centres spent too little time on each activity for pupils to develop any degree of competence. Hill and mountain walking were the most disappointing activities, but the vast majority, such as canoeing, sailing and caving, were "competently and safely taught and in many instances a genuine sense of adventure resulted".

Practice was often best where local authorities had an officer or adviser with clear responsibility for outdoor education, including safety and the assessment of teachers' capabilities for leading outdoor pursuits.

Where schools used voluntary centres run by the Youth Hostels Association or Outward Bound, or



"In many instances there was a genuine sense of adventure"

commercial ones run by holiday firms, the work was best when teachers followed their own programmes, rather than falling in with the packaged ones on offer.

The inspectors stress the importance of visiting teachers, as well as centre staff, being knowledgeable about conservation, and they commend centres which have good links with the local community, and both contribute to it and protect it from the potential nuisance of infant and teenage researchers.

They conclude that policy should now be based on assessment of what has been achieved, and recommend that L.E.A.s should develop a clear policy about their educational aims. They should also develop a policy towards the proliferating school-owned centres.

The inspectors end their survey with a checklist of questions about aims, implementation, resources and training which is intended to help schools, centres and authorities to review their practice.

Inspectors call for renovation programme

Marlborough primary school, Hounslow, needs to pay much more attention to the content and progression of work in every area of the curriculum.

The school took 304 infant and junior aged children (its new nursery unit was not inspected). They came from a mix of council and private housing.

According to the inspectors, it was not attractive: its walls were dirty and paint was peeling off. HMI recommends renovation as soon as money is available. Corridors were cluttered in places with equipment, which could be a hazard for children.

Resources were inadequate for several curriculum areas, and the library had many out-of-date books and was unattractively arranged. Television was used a lot, and HMI suggests its use should be reviewed as broadcasts could largely determine curriculum content in some subjects.

HMI recommends that the school should reallocate special responsibility posts so that clear curriculum guidelines can be set and more challenge provided for able pupils.

HMI praises the school for beginning to make special provision for remedial and able children, and for involving parents in reading.

Cumbria reorganization stalled

by Sarah Bayliss

Sir Keith Joseph, the Education Secretary, has approved part of a reorganization scheme in Cumbria but has disappointed the local authority by postponing a decision on the rest of the scheme.

Proposals were published last July to reorganize 10 schools in West Cumbria. They included the closure of Cockermouth 13-18 grammar school and Derwent 11-16 secondary school and the establishment of a new 11-18 comprehensive.

Eight other schools in the coastal towns of Whitehaven and Work-

ton were also earmarked to become three 11-16 schools serving a tertiary college for the 16 to 19s on a split site, including the existing college of further education.

The education authority had intended to deal with staffing arrangements for all 10 schools simultaneously, giving all teachers an opportunity to apply for jobs in the 11-16 or 11-18 schools or tertiary college.

However only part of the scheme - the reorganization of the two

Dynamic leadership secondary commended

Walthamstow comprehensive is a school on the way to "dynamic leadership" in the taken major reviews of its physical structures in the past years.

But there is now an emphasis for "careful and critical appraisal" of classroom teaching in the subjects, covering both current teaching methods, says HMI.

Changes have led to a system which "could be said to be a model of excellence". It includes changes such as the out of corporal punishment, more freedom for pupils in buildings, which have led to a "positive response", some active teaching, notably in computer studies, and a compulsory course of "essential" for fourth and fifth years.

Walthamstow is a 12 to 13 comprehensive for 962 pupils in a priority area. There are 100 pupils and about a third of pupils need continued attention or specialist teaching. The 39-strong staff is operating in a consortium with neighbouring school, as expected in any depth.

HMI was particularly impressed by the school's two-year in many subjects, some mixed O level and groups. Expectations of capabilities were often too high, and in some subjects, there was little oral work and discussion. Sources were often limited, teaching was directed at the average ability. Staff were not concerned about the most pupils, says HMI.

Music and mathematics are for particular criticism. Pupils are not encouraged to talk out ideas in class and there was too little progress in English and other subjects. The excellent library was underused.

"Major changes" are needed in the curriculum for the last 10 per cent, all of whom at present follow a CSE course. Results of the work is disappointing, and teachers are aware of the need to devise a more suitable preparation for adult life.

The school has taken a "bold approach" to remedial work, with well-qualified team both within the school and outside, and equipped centre, and supporting them in ordinary class work. HMI saw several occasions where remedial teachers were working together in classes, and say staff are aware that they now need to assess the results of the policy.

Another bold innovation was pupils in the first two years of the whole day each week with a teacher for specialist craft work with a focus on art, craft and home economics. Teachers in potentially valuable, but lacks direction and needs review, says HMI.

Cumbria reorganization stalled

by Sarah Bayliss

Cockermouth schools - has been approved so far.

A spokesman for the authority said it would now be up to the education committee to decide whether to press ahead with the Cockermouth changes.

A letter from Sir Keith to Cumbria gave no indication of the date for the remainder of the scheme. It now looks as though the planned starting date of September would be hard to meet in the Whitehaven and Work-



In the market for better consumer classes

by Richard Garner

Consumer education is still aimed almost exclusively at girls and "less able" pupils, says a report published by the National Consumer Council this week.

The report, "A better class of consumer: an investigation into consumer education in secondary schools", says too much emphasis is placed on shopping and concludes: "The aim of consumer education - for both sexes - should not simply be to create a race of shopaholics."

The report recommends that the initial training of teachers should give them an understanding of the nature of consumer education and suggests that each school should have at least one teacher with a specialist knowledge of the subject.

It also suggests that youngsters should be encouraged to obtain some recognition for the work that they do, even if it is not to lead to an examination, and says: "One possibility could be to go outside education - in the case of Edinburgh's award scheme, the Scout Association, the Girl Guides Association and many other organizations - to see how they give awards for non-academic achievement."

The report recommends that the proposed new GCE and CSE boards' Joint Council for 16-plus National Criteria should set up an ad hoc review committee to work out guidelines for consumer education with progressive development for all children regardless of sex or ability.

Research for the report was carried out by studying the courses of examination boards and interviewing teachers, advisers and pupils in different areas of the country.

A better class of consumer: an investigation into consumer education in secondary schools. National Consumer Council, 18 Queen Anne's Gate, London, SW1, price £2.25 including postage and packing.

Government attempts to give parents more choice in their children's schooling have done little to improve their rights, according to a paper being presented to the National Consumer Council's annual conference in Sheffield later this month.

The paper, prepared for a conference study group, concludes that the 1980 Education Act and its sister Act covering education in Scotland also appear to have greatly increased the rights parents already had under existing law or previous court judgments.

In addition, they largely repeat previous legislation in that they permit choice only where it does not interfere with "efficient" education or the efficient use of resources.

L.e.a. tells volunteer decorators to stay out of schools Self-help projects banned

by Sarah Bayliss

Labour-controlled Avon County Council has imposed a ban on parents doing voluntary redecoration and repair work in schools.

The decision has prompted protests from Avon's Federation of Parent-Teacher Associations which says that children's interests will suffer as a result of the ban. PTAs in at least 10 schools have been told to abandon their plans for repainting classrooms.

The clash has arisen because Avon's land and buildings sub-committee has been forced to scrap a £15m maintenance programme to avoid incurring Government grant penalties. Mr Jimmy Jones, chairman of the sub-committee, said this week that because of the penalties the programme would have cost ratepayers two-and-a-half times as much as it should have done.

"We felt it was unfair to pursue the programme at such a ridiculous cost to ratepayers so we deferred it for a year. What we don't want now is parents stepping in and taking over our statutory responsibilities."

We must bring home the impact of the Government's action - no Avon schools shall be decorated this year."

Mr Jones added that his group had inherited "terribly neglected" buildings from the former Conservative administration and that in the more prosperous areas standards had been kept up by parents' efforts. It would be wrong to allow some schools to improve by voluntary efforts while schools in disadvantaged areas declined still further.

The sub-committee would concentrate this year on external repairs and ensure that every school was watertight. He hoped the ban would prompt parents to lobby their local MPs and Mr Tom King, the Environment Secretary, on the damaging effects of penalties.

While stating that parents can continue to undertake "non-statutory" work such as organizing fetes and maintaining equipment they have brought such as swimming pools and minibuses, the county has

simultaneously barred them from doing any kind of manual work on school sites. In future they must employ union labour at agreed council rates.

Any job worth less than £200 could be supervised by the head but more extensive work would have to be agreed by the sub-committee.

Mr Ron Hancock, secretary of the Avon Federation of PTAs, said it was "a fact of life" that there were inequalities between schools and that the authority should not interfere where parents were willing to help in any way.

He knew of schools where parents had converted spare classrooms into libraries and where extensive redecoration had been done by parents, teachers and children.

Mr Michael Smith, a convenor for the Secondary Heads Association in Avon and head of Filton High School in Bristol, said that he personally approved of the ban. "I don't think the way to tackle cuts is to do a boiler suit and to go up a ladder and get on with it yourself."

Cafeteria experiment pays off

The number of pupils taking school meals increased slightly in 1982, Dr Rhodes Boyson, education junior minister, told the House of Commons this week.

In October 1981, 49 per cent took school meals compared with 49.4 in 1982. But numbers of pupils on free meals and those bringing their own had also risen: 13.9 compared with 11.9 had free meals, and 28.3 compared with 27.4 brought their own.

More secondary school children are eating school meals: 44.6 per cent in 1981 to 46.1 per cent in 1982, but in primary schools the proportion declined from 52.4 to 51.8 per cent.

The increase in secondary numbers is a result of cash cutbacks being introduced, Dr Boyson said. "Of these authorities which have converted all their secondary schools to this system, more than half have increased the take-up of paid meals compared with 1980."

High Quality

Don't miss the 16 page Computer section.

Low Prices

E.J. Arnold - Simply better Value for Money

At E.J. Arnold we believe in striking a happy balance between top quality goods at the most competitive prices. We don't believe in compromise where quality is concerned, and that means that everything you buy from E.J. Arnold will be designed and finished to a high standard. Many of our items are exclusive, designed by E.J. Arnold's product specialists. Add to this the fact that over half the prices in the E.J. Arnold and E.S.A. catalogues have been held or reduced for 1983, you can see why E.J. Arnold is the biggest and most respected name in educational supply. Complete the coupon below and see for yourself.

Check on department heads recommended

The best is very good at Norton Canes comprehensive school in Staffordshire. But "a little of the teaching was very poor", and HMI recommends that heads of department should be made more accountable, and their work should be systematically checked.

Norton Canes, originally a secondary modern, took its first comprehensive intake in 1975. It had grown from 450 pupils in 1974 to 751 in 16-year-olds last October. The pupils' homes represent a reasonable social mix, and the school has a middling intake, with few pupils of top ability, and few with serious learning difficulties.

The school is praised for sound

exam results, a balanced curriculum, good relationships, interesting writing and recognition of the importance of oral work. But HMI found the lack of interest in reading to be "a major area of concern".

HMI recommends that the level of reading should be raised, especially in the top two years.

The school bands its intake on the basis of standardized tests taken in the last year of primary school. One result seems to be that, although there are more boys than girls in every year group but one, there are nearly twice as many girls as boys in top bands, and twice as many boys in the lowest band.

Special Education in Scotland

With the introduction on January 1 of the new regulations governing special education, there is an urgent need for all teachers to become more familiar with the challenges of teaching handicapped children, in the ordinary classroom as well as in special schools and classes. During January, The Times Educational Supplement Scotland published a series of articles on special education: how individual authorities are reacting to the new regulations; how parents are coping; a case study of an individual school; the implications for teacher training. These have now been reprinted in a six-page format and are available for 50p each (including postage) from the address below.

Please send your cheque/postal order (no cash please) made payable to Times Newspapers Limited to:
The Times Educational Supplement Scotland
58 Hanover Street, Edinburgh EH2 2DZ

Please send me a copy of the following 1983 E.J. Arnold catalogues:

☐ E.S.A. Vital Years
☐ Early Years
☐ Maths and Science
☐ Music
☐ Art and Craft
☐ Computers in Education
☐ Audio Visual, Furniture and Storage
☐ Stationery and Sundries

Name _____ Position _____
School _____
Address _____
Education Authority _____
Return to E.J. Arnold and Son Limited, FREEPOST
Educational Marketing Department, Parkside Lane
Dewsbury Road, Leeds LS11 9YY.
Telephone (0532) 772112

Sarah Bayliss reports from the Welsh Regional Society of Education Officers Study Conference, Llandrindod Wells, Powys

L.e.a. officers say appeals panels need to be trained

Training schemes for the appeals panels set up under the 1980 Education Act were called for by officers in a discussion on the effects of the new legislation.

Officers from Clwyd, West and South Glamorgan were particularly keen to spell out to panels the clause in the Act which states that a parent's choice of school can be overturned if it would "prejudice the efficient use of resources" in a local authority.

Mr Clayton Heycock, deputy director of West Glamorgan, who chaired the conference, said appeals panels should understand that if they allowed a school's intake to rise there would be big implications for staffing and, hence, finance.

Most authorities had set admission limits to schools as a way of managing falling rolls. If appeals panels ignored those limits then there would be extra staffing as well as building costs to meet.

Most authorities spent at least half their budgets on the teaching force. "Staffing is a critical factor in the efficient use of resources," he said.

In one authority where appeals panels had found in favour of most parents it had been necessary to employ extra staff in an already large comprehensive and to reorganise the timetable.

In that example, where the authority did not wish to be identified, the appeals panel had heard each parent's case separately and decided on its merits without weighing it against other cases or against the planned admission limit. As the appeals process went on, entries to the school gradually rose until more than a dozen pupils had to be admitted.

Mr Edgar Lewis, area education officer for Clwyd, said his authority was considering inviting the Workers' Educational Association to provide training sessions for appeals panels. It would go against the independence of the panels for the local authority to run its own course.

Another officer said councils must guard against simply giving panels an officers' perspective. "They are supposed to give a common sense lay view on each case and there is a danger in making them too professional."

Mr Lewis, whose county of Clwyd was awarded top marks by the magazine *Which?* for the information on schools it provides for parents, said the number of appeals had been greatly reduced last year by retaining a system of consulting parents who were disappointed at not getting their first choice of school.

Parents face bureaucratic nightmare

The new bureaucracy created by the 1981 Education Act could prove a nightmare for parents, the conference was warned.

In an address on the workings of the Act, which comes into force on April 1, Mr Iorrie Jones, Dyfed assistant education officer, was concerned that the spirit of the Act to increase parental involvement in special education would be nullified by the legal structure being imposed.

"I'm concerned that with all these letters flying about - letters which we are legally obliged to send - we shall formalize a situation which ought to be kept as informal as possible."

Mr Edgar Lewis, area education officer in Clwyd, said: "The level of bureaucracy is frightening, especially for parents who themselves have reading difficulties."

Mr Jack Davis, assistant education officer for Powys, who chaired the session, said that to reassure parents in his authority official correspondence would be delivered by hand by educational psychologists.

Several officers expressed concern

about the increased workload of educational psychologists under the Act and the absence of resources from Government new posts. There were also concerns about the training of three-year MEd course at University of Wales.

"There is going to be a need for educational psychologists but that seems to be a trend for training," said Mr Ellis, deputy director for the people from?"

Several officers expressed concern

Wanted: software The prize: £1,000

A shortage of good software for computer-assisted learning has prompted one Welsh county to run a major competition in the belief that teenagers can write excellent programs for use in schools.

Mr Tony Timbrell, adviser for information technology and computer studies in Mid Glamorgan, said he had seen enough project-work to be convinced that pupils would be a good source of learning materials.

His county had launched a competition for primary and secondary schools and colleges with prizes worth £1,000 on offer. A BBC micro, a colour monitor and a print-out would be awarded to the winners.

"Many of our children produce work of an extremely high standard and it is expected that the competition will produce original and exciting software."

The shortage of good software was a major problem facing schools; publishers seemed more interested in rooking programmes for leisure purposes on home computers than in education and schools.

But Mr Timbrell advised officers to be strict with schools which resorted to copying the good material which was available. "If large-scale copying goes on then there will be no money to be made and the publishers will stop producing altogether."

Some of the software he had seen which was being "pushed" on schools was no better than a teacher could produce on a blackboard or overhead projector.

Given all this, he advised every local authority to establish a software centre, similar to the centre pioneered by Mid Glamorgan in one of its schools 12 years ago.

The centre at Port Talbot comprehensive was unique in Wales by being based in a school, rather than in a college or as an independent office. It had proved highly successful in establishing links with other schools and in distributing and assessing hard and software.

The staff of four teachers plus two trainees from the Youth Opportunities Programme acted as an advisory service to all schools. It processed material that would otherwise take up valuable computer time.



Computers: Mid Glamorgan aims for school-based courses

and offered in-service training to teachers.

So far this term 380 teachers had been on courses. The long-term aim, when schools were better equipped with machines, was to run school-based training courses.

Mr Malcolm Shorney, chief adviser for Clwyd, described a big investment programme in his county which means every secondary school is already wired up to take at least 15 micros.

The programme has cost £200,000 so far and a further £600,000 is committed over the next three years. It includes 15 teacher secondments in each of the main subjects plus a team of computer personnel,

all of whom were appointed in 1981 or part-time posts in the term.

Mr Shorney said computer education was one of Clwyd's top priorities; an advisory team had been set up some years ago with the aim of providing hardware and a range of maintenance for machines, encouraging curriculum and software developments and organizing in-service training for teachers.

Every secondary school - there are about 30 - now had one computer room wired up to take 15 micros with a disc machine, and other rooms such as laboratories and libraries had additional equipment. At least one machine was available to classes.

Growing need for in-service courses

In-service training for teachers, including school-based training, was more vital than ever before, given the changing demands on education and schools, said Mr Geoffrey Crump, chief education officer for Avon, in an opening address.

In a speech on education and change, he said teachers needed more opportunities to reflect on people needs. They could be the key people

in changing outdated attitudes towards leisure and work ethics, in changing the attitude that academic qualifications were somehow better than vocational qualifications, and that white collar work was superior to blue collar work.

"Education has got to be much more relevant to the lives of children and students, and to achieve that teachers need time for reflection."

In Avon, every school had days a year of school-based in-service training and there was a time equivalent secondment for teachers. Links with industry and commerce could be improved through in-service training, through agencies staffed by teachers, as Avon's Resources for Learning and Development Unit, could be encouraged.



Experiment paves way from home to school

by Biddy Passmore

The child standing forlornly at the door of the infants' school as its other retreats into the distance would soon become a figure of the past in at least one part of Northern Ireland.

An experiment with pre-school children being conducted by the Western Education and Library Board attempts to overcome the "culture clash" between home and school that can cause so much misery in the early days.

Parents are invited into the local primary school for their young children for group sessions of half an hour a week for seven weeks.

They are advised by a teacher or educational psychologist how to encourage their children to learn at home through such simple activities as dressing on their clothes or laying out their toys.

Children, meanwhile, are encouraged to play with their parents after infant teachers. They are not at school to be taught but to learn to play with their parents. Mr John Owens, the principal educational officer, stressed this week.

Parents are invited into the local primary school for their young children for group sessions of half an hour a week for seven weeks. They are advised by a teacher or educational psychologist how to encourage their children to learn at home through such simple activities as dressing on their clothes or laying out their toys.

Children, meanwhile, are encouraged to play with their parents after infant teachers. They are not at school to be taught but to learn to play with their parents. Mr John Owens, the principal educational officer, stressed this week.

Parents are invited into the local primary school for their young children for group sessions of half an hour a week for seven weeks. They are advised by a teacher or educational psychologist how to encourage their children to learn at home through such simple activities as dressing on their clothes or laying out their toys.

Children, meanwhile, are encouraged to play with their parents after infant teachers. They are not at school to be taught but to learn to play with their parents. Mr John Owens, the principal educational officer, stressed this week.

Parents are invited into the local primary school for their young children for group sessions of half an hour a week for seven weeks. They are advised by a teacher or educational psychologist how to encourage their children to learn at home through such simple activities as dressing on their clothes or laying out their toys.

Children, meanwhile, are encouraged to play with their parents after infant teachers. They are not at school to be taught but to learn to play with their parents. Mr John Owens, the principal educational officer, stressed this week.

Parents are invited into the local primary school for their young children for group sessions of half an hour a week for seven weeks. They are advised by a teacher or educational psychologist how to encourage their children to learn at home through such simple activities as dressing on their clothes or laying out their toys.

Head charges adviser with ignorance

by Julia Hagedorn

Mr Stuart Sexton, Sir Keith Joseph's political adviser, was accused of "classic ignorance" at a conference last week after giving a definition of the difference between mixed age and mixed ability teaching in primary schools.

Speaking at the annual conference of the National Association for the Support of Small Schools, Mr Sexton had said mixed ability teaching was shown to be a failure and the average teacher found it impossible. It was undesirable, he said, even in primary schools, above the age of eight.

Mr Sexton defined mixed ability teaching as when children were not separated according to age. The head of a Norfolk primary school then accused him "of demonstrating the classic ignorance of the very terms you are basing your arguments (for closure) on."

After the conference, Mr Sexton said: "The Government is doing its best to encourage setting and streaming at the top end of the primary school". He also admitted that when assessing the educational grounds for closing a school, one of the determining factors was whether

it had mixed ability teaching. He said that the Government should not condone a system of mixed ability teaching wherever it was available.

In his speech, Mr Sexton said that the state of Section 12 notices on schools reflected the drop in the number of children. By 1986, the system would have a surplus of three million places, and the Government was taking only two out of every five surplus places out of use.

"Whatever is spent ought to be spent on education and go to the children," he said, "not on heating and lighting empty places in partly filled schools or classrooms."

He said that he would like to see discussions with organizations such as NASS on the possibility of the proposed voucher scheme being used by parents in schools threatened with closure supported by financial top-ups coming from the rural community.

He admitted that it was too early to say whether anything on the voucher scheme would be included in the election manifesto: the Government had not yet agreed on a sensible practical scheme but was looking at

ways and means of widening parental choice.

Professor Richard D'Aeth, President of Hughes Hall, Cambridge, and co-organizer of the policy study, *A Positive Approach to Rural Primary Schools*, drew attention to the drop in morale. In Cambridgeshire, advisers had difficulty in filling vacancies even with new teachers who were desperately looking for their first post. They did not wish to go to a school that might be closed before they even took up their post.

He criticized a system where a school could be reprieved one year, only to come up on the list for closure the next year. And he called for the NASS to recommend that the length of time a school has for consultation before the decision to close it is made should be a minimum of six months; and that if a school won a reprieve, it should be for five years.

He also recommended that the l.e.a. should put its alternative proposals with costing at the time of any proposed closure. This, and the local response to it, should be part of the appeal procedure to the Department of Education and Science. "At

present, the dice are loaded hopelessly against good village schools," he said.

He pointed out that most closures take place because the unit cost is higher than in large urban schools, but warned against this argument. "The savings look real to the education committee but children are walking further and parents are paying for transport. If rural life were based on unit costs, it would be very difficult to provide tap water, sewerage and phones. Why are they not closed down?"

County councils which close village schools purely on the strength of an arbitrary head count were criticized by Mr Alan Beith, Liberal spokesman on education, at a meeting of the Cumbria Association for Rural Education last Monday.

Mr Beith, MP for Berwick-upon-Tweed, said counties such as Cumbria and Northumberland should be looking for ways to support village schools. They should select teachers with aptitude and dedication and provide them with in-service training enabling them to exchange jobs occasionally with colleagues in bigger schools.

FREE

Take out a year's subscription to The Times Educational Supplement and we will also send a free copy (worth £7.75) of the very latest hardback edition of the Concise Oxford Dictionary specially bound for The Times Supplements. It contains entries for over 40,000 headwords, with a total of some 75,000 vocabulary items including derivatives, compounds, and abbreviations. Simply complete the coupon below and send it together with your cheque or postal order for £27.50 to the address shown.

This offer applies to new subscribers in the UK only.

THE TIMES Educational Supplement

Please send a free TES Concise Oxford Dictionary and a year's subscription to the Times Educational Supplement.

I enclose my cheque for £27.50 (Cheque made payable to Times Newspapers Ltd). Please send to:

NAME _____
ADDRESS _____

SIGNATURE _____ DATE _____

Please send this coupon with your cheque to FRANCES HOUSE, The Times Educational Supplement, Priory House, St John's Lane, London, EC1M 4BX.

Wider horizons, a broader spectrum in the new Hestair Hope Art and Craft catalogue.

CHOICE QUALITY VALUE CREATIVITY

You'll find four very important principles and over 80 full colour pages in the latest newly extended Art and Craft catalogue from Hestair Hope.

A choice that takes in every medium and material from finger paints and dyes to candlecraft, pottery and leather work.

Quality on every page, with trusted products such as Clarks embroidery threads, Solarbo balsa materials and Stanley Tools, and Crystal a new range of paints designed especially for pre-school and primary children with built-in word and picture associations...

colours the way children see them.

Value from the new Hestair Hope selection of bulk economy packs covering all of the main areas of activity.

In other words a creative catalogue with just the right balance of products and ideas to stimulate creativity in every child.

Send for your FREE copy now!

To make sure you receive your 1983 Hestair Hope Art and Craft catalogue with the minimum of delay, post this coupon direct to our Central Catalogue Dispatch Centre: Hestair Hope Limited, FREEPOST, Crown Point Mills, Mayfield Place, Wyke, Bradford, West Yorkshire, BD15 8BR.

No stamp needed if posted in the U.K.
BLOCK CAPITALS PLEASE
Name (Mr/Mrs/Miss) _____
School/Organisation _____
Position _____
Address _____
Postcode _____

Hestair Hope Limited, 81 Philip's Drive, Royton, Oldham, OL2 8AG Telephone: 061 852 1411

Authority seeks blacks' views on ethnic policy

by Diane Spencer

The Inner London Education Authority is planning a major conference to gauge reaction among the capital's black community to its programme for multi-ethnic education and equality of opportunity. About 600 are expected to attend.

Mrs Frances Morrell, deputy leader of ILEA, said this week: "I felt there had not been as much of a feedback from black groups as there should have been."

"The conference should ensure that what we are trying to do on behalf of black parents and the community meets their approval."

ILEA's initiative, launched last summer, includes the appointment of an equal opportunities officer, liaison officers in each borough for multi-ethnic education, ethnic advisers for the school meals service, publishing a statement of anti-racist policy and guidelines on anti-racist strategies for schools, and developing mother tongue teaching.

Mrs Morrell said the initiative had produced "extremely valuable and rigorous criticism from groups such as the Camden Community Relations Council, All London Teachers Against Racism and Fascism, and individuals such as Chris Mullard from the London University Institute of Education."

The conference at the end of April would be divided into discussion groups with results presented in a plenary session. The last session would be devoted to a debate on how black groups should be represented on ILEA.

Study highlights dissatisfaction over engineers' training

The sorry state of British engineering education was highlighted again this week with the publication of a report from the Goals of Engineering Education Project at Leicester Polytechnic, Jon Turner writes.

The study shows that both graduate engineers and their employers are very dissatisfied with the existing

curriculum, and it has been welcomed by Sir Monty Mumford, whose new report on engineering in 1980 called for radical changes in education and training.

Engineers interviewed for the study thought they did not know enough about the broad business context within which they worked,

or about human relations and social skills. Speaking at a press conference on Monday at the Institute of Electrical Engineers, Sir Monty said that the Leicester study underlined the need for urgent action to change the position of engineers.

Mr Geoff Beuret, who headed the study, agreed that his findings were in line with young graduates' views on the picture painted by Sir Monty's report, but stressed they had "no desire to be engineers - our critique is based on the views of engineers themselves."

ILEA secondary school suspension figures spiral

by Nick Wood

The number of children suspended and expelled from London secondary schools because of bad behaviour rose dramatically last year. Suspensions of primary children have, however, fallen.

Official figures show that there were 1,355 suspensions from secondary schools in 1981-82, 513 more than in 1979-80 when comparable data were last available. Allowing for falling rolls, the number of suspensions has grown by 80 per cent.

Only one child in 100 in secondary schools is not suspended each year. Expulsions - reserved for the most serious offences - have also increased by over 50 per cent. Last year, 211 youngsters were banned from comprehensives - 68 more than in 1979-80. In primary schools, suspensions fell from 108 to 83.

The figures, presented to the schools subcommittee of the Inner London Education Authority last week by Mr William Stubbs, the education officer, do not include the three-day temporary exclusions that schools use as a "cooling off" period with unruly children.

Three in four suspended pupils are boys and most - over 850 - are aged 14 and 15. Mr Stubbs, describing the overall level as "relatively low", expressed concern about this age group.

Frustration of under-achieving youngsters, the perceived irrelevance of the curriculum to their

needs, uncertainty about the future and efforts by schools to tighten up on discipline were the probable factors behind the rise, he said.

Abolition of corporal punishment was, with the exception of a "small minority" of schools, not a blame for the growing number of suspensions.

This was disputed by leaders of the National Association of Schoolmasters/Union of Women Teachers. Mr Brinn Jones, deputy headmaster of Highbury Grove School in north London and an executive member of the union, said that banning the cane was a key factor in the increase.

Some improvements have taken place, Mr Stubbs said. After the introduction of revised procedures in April, 1981, the average length of a suspension had been cut from six weeks to three and a much higher proportion of pupils were now being reintegrated to their own schools.

But the use of shorter suspensions had led to an increase in the number of suspensions. More pupils are being suspended more than once in a single year.

The figures seen particularly disappointing in the light of the ILEA's increased spending on support centres, popularly known as "sin bins", attached to schools. In 1978, it announced it would increase its budget by £1m a year so that every school would have somewhere

to send problem children without resorting to suspension.

The commitment has been met - there are now over 150 support centres in the capital catering for nearly 2,000 children at any one time - but suspensions have still gone up.

Authority inspectors are now reviewing the contribution made by support centres and will be discussing their findings with heads.

The subcommittee also heard that a handful of schools are making extensive use of suspension as a way of dealing with difficult children. They had distorted the figures in the three areas with the highest levels of suspension - City of London and Tower Hamlets, Lambeth and Wandsworth.

"There is nevertheless concern that in too many cases suspension is seen by schools as a form of punishment and not a means of solving a child's difficulties in school," Mr Stubbs said.

In future, school governors will be given timely reports of suspensions in all schools in their area so that they can compare their practice with that of their neighbours, the subcommittee decided.

The report has also been passed to the committee under Dr David Hargreaves which has been asked to report on high truancy and poor exam results in London schools.

Campus scholarship

More than 600 overseas students taking up university scholarships in the United Kingdom under the Commonwealth Overseas Students Scheme this year. The figures were 479 new scholars in 1981 and 347 in 1980, the first of the scheme's operation.

But nearly two-thirds of the applications for 1982 would be from students already studying in this country, the annual survey of the scheme points out. It says "disappointing outcome" was mainly due to the large number of awardholders still to be found in study here.

Under the scheme, students outstanding merit are given an award equivalent to the difference between the home fee and the "full cost" fee for overseas students (the difference this year is £1,300 for arts courses, £2,000 for science and £3,200 for medicine). But the student still has to find extra £5,000 a year for living maintenance.

Just over one third of the awards have gone to students in research at Oxford and Cambridge with London's Imperial College third place. The greatest number of students - 99 - comes from the United States, with 41 from Malaysia and more than 30 from Brazil, Canada and Hong Kong.

The scheme, which is run by the vice-chancellors' committee, is worth about £2.5m in the current year. Awards are renewed for a second year, provided the student makes satisfactory progress.

Children's progress in mathematics and English dips sharply in the year after they transfer to middle or secondary schools, according to the latest research from the Leicester University ORACLE (Observational Research and Classroom Learning Evaluation) project, published this week.

The other startling finding is that, when it comes to curriculum and teaching methods, life is much the same for pupils whether they transfer to a 9 to 13 middle school, an 11 to 14 high school, or an 12-plus comprehensive.

The research team studied 103 first years and 28 of their teachers in six middle or secondary schools. Three local authorities were involved, each with a different age of transfer. The schools in each authority were paired to provide as great a contrast in style as possible.

One school in each pair took a more "primary" approach to first years, leaving them with one teacher for much of their time. The other swung them straight into "secondary" style specialist teaching. The "primary" type schools were less likely to go in for uniform, banding or setting, and conduct marks and tests.

The project had previously collected a great deal of information about the same pupils' final years in their primary schools, including data on their progress and working styles, and their teachers' methods.

Almost all the children had made good progress on basic tests of mathematics, reading and English in both of their last two primary years. But a year after transfer, only 63 per cent had made gains on the same tests - and those gains were much smaller than in previous years.

Seven per cent marked time in their new school, and just under a third slid back on their test results. Overall, girls did much better than boys: three quarters made progress and only 15 per cent fell behind. With boys, fewer than half made gains and 45 per cent did worse than they had in the previous year.

There were marked differences between individual schools on the progress pupils made. But the differences did not relate to whether the schools had a "primary" or "secondary" ethos, or to the age of transfer.

Moreover, the pupils who lost ground had also lost motivation by the end of their first year at the new school. Before transfer, they had been as motivated as the rest. A year later, their scores on a test of motivation were 10 per cent lower.

However there was a small group of 15 pupils who made much better progress in their new schools than they had in their last primary year. Ten of them were boys. They were mainly children who had not learned to work steadily in primary school, and seemed to respond well to the change.

The children's new schools may have looked very different on paper, in terms of age-range, organization, and disciplinary style. But the work children did in their first year, the teachers' approaches, the sanctions, and the way they were expected to work in class were "remarkably similar", whatever the type of school.

The researchers observed mathematics, English and science teaching in all six schools. They found few differences between the schools. But within all the schools

teachers were much more likely to take a one-to-one approach

to the pupils. The first prize is £1,000 for the school, £15 savings certificate for the pupils and a two-day visit to the Murchison oil platform in the North Sea. The final date for entries is March 31, and they should be sent to the National Schools Competition for Energy Conservation, Free London SW3 6BR.

Other ideas include a rock opera on the "save it" theme from a Warrington school, and a coffee pot-shaped kettle which is more efficient than traditional kettles.

Virginia Makins examines a Leicester University study which suggests 1 in 3 pupils regress in maths and English in the year after leaving primary school

Disturbing answers from the ORACLE

there were marked and consistent differences between the teaching style and pupil behaviour in the different subjects.

The maths teachers were much more likely to take a one-to-one approach, with children working mostly on their own (often at work they had covered two or three years earlier). Both English and science teachers went in for class teaching (displaying interesting strategies for slowing down the quickest children). English teachers encouraged more cooperative work between pupils.

The different methods led to different behaviour among pupils. In maths lessons, the vast majority be-

came "easy riders... doing just enough work to avoid the teacher's attention". The few children who worked hard in maths were hard workers all round.

In both science and English lessons, nearly half the children worked hard. But the workers in English were often not the same as the workers in science. Although boys were more likely to coast in English, and girls in science, both sexes produced at least 40 per cent of the "toilers" in both subjects.

The similarities between the schools have led the researchers to question the success of 9 to 13 middle schools in acting as a bridge be-



The performance of nearly half the boys actually deteriorated

between primary and secondary teaching styles. The pressures from the next school up for specialist science or French teaching seemed significantly to affect even their first year curriculum.

The evidence seems to support the Plowden committee's recommendation that 8 to 12 was the most suitable age range for middle schools, says the report. The rising

12s were more likely to be excited about their impending transfer rather than anxious, and the younger middle schools were "more likely to maintain a distinct identity."

Moving from the Primary Classroom, edited by Maurice Clifton and John Willmott. Routledge, £6.95.

NUT poll officer faces 'no confidence' motion

by Richard Garner

A candidate in a key National Union of Teachers' election is tabling a motion of "no confidence" in the union's returning officer. This follows his failure to get the election re-run or be subjected to independent scrutiny when ballot papers were discovered after the first count.

Originally, Mr Dennis Charman, a left-winger, was given a two-vote majority over his rival, Ms Sue Tarnfield, in elections for the vice-presidency of the NUT's West London Teachers' Association.

In addition, 13 of the 20 places on the association's committee had been won by candidates on a left-wing ticket who were opposed to the existing leadership.

There was a demand for a recount in the vice-presidential election as a result of which 25 votes were found which had not previously been counted. It was then decided to check the votes in all the elections to see whether they were valid.

The outcome was defeat for Mr Charman and the return of the existing leadership with an overwhelming majority of the 20 seats on the committee.

At stake in the elections is the make-up of the association's delegation to the Inner London Teachers' Association - finely balanced between supporters of the existing leadership and the union's left-wings.

Mr Charman said the call for a recount in the vice-presidential election should not have led to all the votes being checked again.

He had written to the returning officer, Mr Merrill Hamner, who is also the association president, asking for a re-run of the election or independent scrutiny carried out by the Electoral Reform Society, a union officer from outside the association or an independent observer.

However, legal advice from the union's headquarters said that it was up to the returning officer to decide whether the election result should be declared.

Mr Charman said he was tabling a motion of no confidence in Ms Hamner at the next general meeting of the association because she had ignored the request for a re-run of the election or an independent inquiry - and had declared the result without consulting all the candidates.

Ms Hamner could not be reached for comment but Mr Andy Dyer, secretary of the West London Teachers' Association, rejected any criticism of the way the election had been conducted. "There is no question of anything improper being done," he added.

Meanwhile, an investigation into the elections for the three key posts in ILTA had still not been completed this week by the Electoral Reform Society.

On the first two counts, the Left had won all three posts - including that of the general secretaryship held for the past 15 years by Mr Bob Richardson. But there were discrepancies in the number of votes cast between the two counts.



Pupils tell staff to 'save it' with car shares

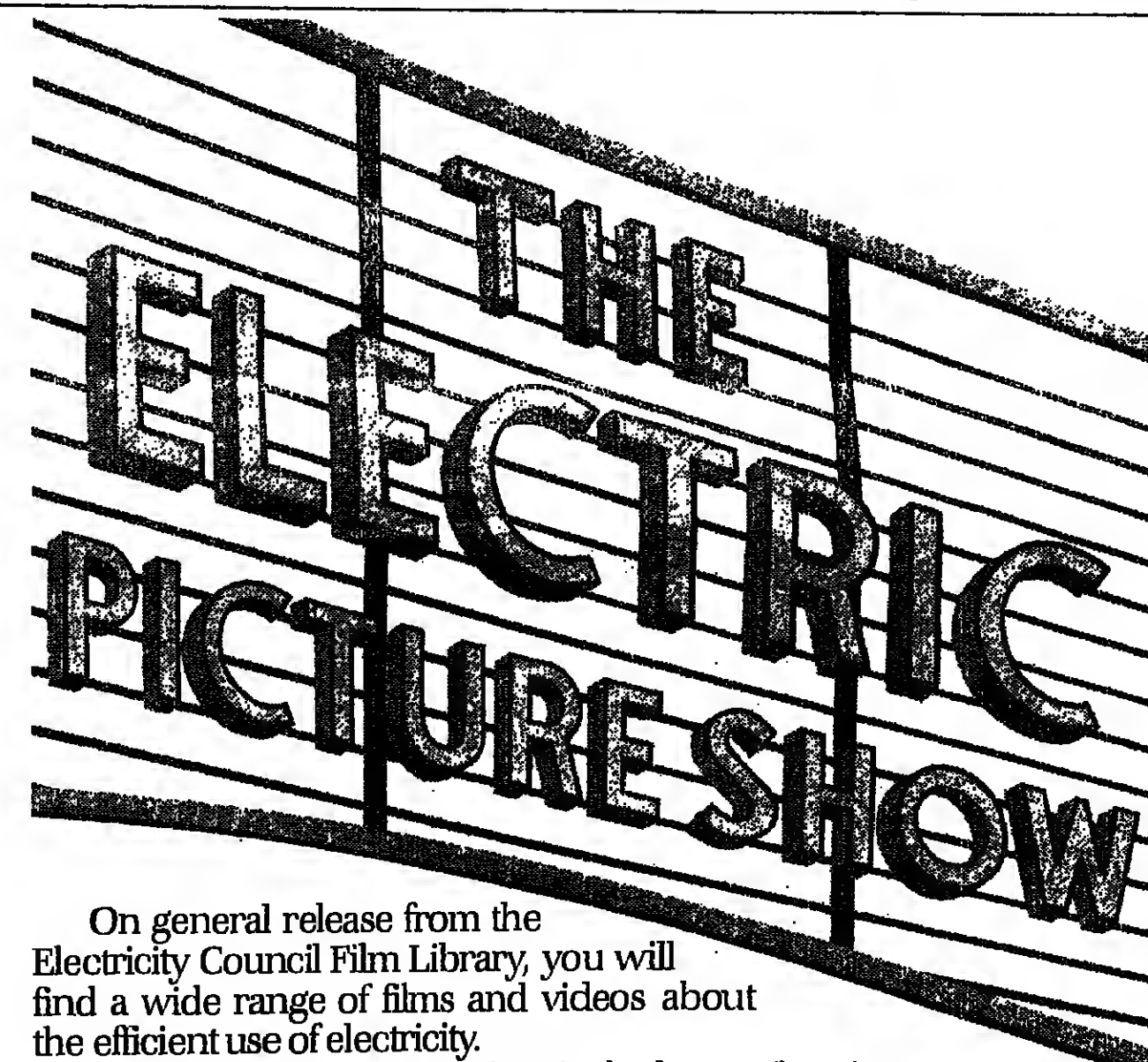
Pupils at a school in Billing, Teeside, are urging their teachers to save petrol by sharing car journeys to work. Twenty-two of the staff's 33 cars used could be left at home, and have worked out routes to save it.

This is just one of many imaginative ways pupils have responded to

an energy conservation competition organized by the oil company, Conoco, on behalf of the Department of Energy.

Other ideas include a rock opera on the "save it" theme from a Warrington school, and a coffee pot-shaped kettle which is more efficient than traditional kettles.

The first prize is £1,000 for the school, £15 savings certificate for the pupils and a two-day visit to the Murchison oil platform in the North Sea. The final date for entries is March 31, and they should be sent to the National Schools Competition for Energy Conservation, Free London SW3 6BR.



On general release from the Electricity Council Film Library, you will find a wide range of films and videos about the efficient use of electricity.

We have films about electricity in the home, farming, horticulture and catering.

And the range includes features on industry and commerce.

There are special films for schools, too, explaining the benefits of electricity.

All of our productions can be obtained on free loan and can also be purchased.

To see what's now showing on Film Electric, send for a free catalogue.

The Electricity Council Film Library,
15 Beaconsfield Road, London NW10 2LE
Please send me a free copy of your catalogue.

Name.....
Address.....

Position.....

FILMELECTRIC
The Electricity Council Film Library and Video
CH441

Soccer tournament kicks off Met drive against crime

by Bert Lodge



Sir Kenneth Newman... concern at youth involvement in crime

About 50,000 young people took part in last season's Metropolitan Police soccer tournament. The competition gained entry in the *Guinness Book of Records* as the largest soccer competition ever sanctioned by the Football Association.

The event was recently called "the flagship of Metropolitan Police involvement with youngsters and sport" by Sir Kenneth Newman, Metropolitan Police Commissioner. He told the London and South east region of the Sports Council that police involvement in sport was a major element in the capital's crime prevention policy.

Sir Kenneth said the number of serious crimes reported in London in 1981 was 17,500. Last year it was 700,000.

He added: "The evidence available to me suggests a far more serious involvement in crime by young people. More than half the people arrested for serious crime in London are under the age of 21. Over 25 per cent of the people arrested for serious crime are between 10 and 16-years-old."

Besides the youth soccer competition there were many smaller local schemes which were part of the drive against crime. "In response to demand from local youngsters in Wandsworth my officers even arranged a disco dancing contest.

Last year it attracted 4,000 young people from ethnic backgrounds. What was particularly pleasing was the enthusiasm and support received from their parents," said Sir Kenneth.

Meanwhile more borough-based consultative committees would be formed with whom the police would cooperate.

"Shifting the onus for crime prevention back to the community will be key themes of the police input to

the committees and, here, sport is a useful means."

Sir Kenneth described one youth club in Kennington, south London which started as a result of a joint initiative by police and local community leaders who were concerned about facilities for the 10-18 age group.

Sports Council and Metropolitan Police funds paid for and furnished a disused hut. Now the club, whose management committee included four officers, had proved so successful that it could not cope with the number of youngsters eager to join.

Sir Kenneth believed such exercises justified the heavy commitment in police time and manpower. "Many thousands of youngsters have become involved in constructive activities who might, otherwise, have been on the streets," he said.

"Policemen and young people are meeting in non-abrasive encounters which encourage the breaking down of stereotyping on both sides. Parents are encouraged to become involved and some police schemes have led to clubs being established and run by parents.

"There is a role for sport in community policing. It shows young people in the area that society has not rejected them and it helps values such as self-help, discipline, and responsibility."

US basketball team considers extra fixtures

An American high school is sending two basketball teams to Britain in June and July and although they have some fixtures they may be able to fit in one or two more despite their intention to include a Continental tour

in their itinerary. The teams, from Redmond High School, 17272 N.E. 104th Street, Redmond, Washington, will be 14 to 15 and 16 to 17-year-olds. They arrive in Europe on June 18, and

though they will have their own transport would like to arrange to stay with host teams where possible. Further information is available from Mr Al Williams at the school address or telephone 206-828 3385.

INDEPENDENT TELEVISION FOR SCHOOLS & COLLEGES

Choice from the blackstuff...

In 1983-84 Independent Television will again be broadcasting a full range of programmes for schools and colleges.

Listed below are the series being transmitted in each ITV region.

For further details of these and additional local series look in the Annual Booklet in your school now.

- | | | | |
|------------|--|-------------|--|
| 4-6 | My world / general interest | 8-12 | History around you |
| 4-6 | 1...2...3...got! / Introducing maths | 8-12 | Good health / health education |
| 5-6 | Let's read...with Basil Brush / Introducing reading | 8-12 | How we used to live / social history |
| 5-8 | Alive and kicking / all about me | 9-12 | Tomorrow's people / living in a multi-cultural society |
| 6 and over | Stop, look, listen 'A' & 'B' / environmental studies, language development | 9-12 | Media English / talking, reading, writing |
| 6-7 | Seeing and doing / miscellany | 9-12 | Imagery for deaf children and slow-learning groups |
| 7 and over | Basic maths | 10-13 | Living and growing / sex education |
| 7 and over | Starting science | 10-13 | Believe it or not? / religious education |
| 7-9 | Finding out / general interest | 11 and over | Your living body / human biology |
| 8-9 | Gather round / religious education not TV | 11 and over | The French programme |
| 8 and over | Ways with words / English / language development | 11 and over | The German programme |
| 8-11 | Picture box / creative stimulus | 13-18 | Craft, design and technology '1' & '2' |
| 8-11 | A place to live / natural history | 13-18 | The English programme / miscellany |
| | | 14 and over | Cities / geography careers education |

- | | |
|-------------|---|
| 14 and over | Making a living / careers education |
| 14 and over | Parenthood / transition from school to adult life |
| 14 and over | People and politics / political education |
| 14-17 | History in action / twentieth century world history |
| 14-17 | Physics in action / O-level and CSE physics |
| 14-17 | Starting out / personal relationships |
| 14-18 | The land / geography of Britain |
| 14-18 | Documentary / nature / general |
| 14-18 | 10x Economics / economics |
| 15-18 | Facts for life / health education and human biology |
| 16 and over | Britain / history general studies |
| A-level | Geography today / the search for order |
| A-level | Evolution / biology |
| A-level | Experiment / physics, biology and chemistry |

ANNUAL PROGRAMME 1983-84

In brief...

On the run

Teachers formed the biggest professional group in last year's London Marathon and hundreds are in training for this year's event on April 17. Among them is Rob Burn, a senior lecturer in the Faculty of Art and Design at Bristol Polytechnic who raised £500 for his local village school when he completed the London run in 1981 and who has since finished marathons in New York and Athens. He took up running at the age of 36 and has written a humorous diary of his training to be published next Monday. *In the Long Run* by Rob Burn is published by Pelham Books. Price £6.95.

Boxing scheme

The standards scheme of the Schools Amateur Boxing Association has been revised. Again, three levels of achievement - proficiency, county and national - are put forward. A boy need swing no punches in anger to progress. At the top level he will be watched sparring and have to do it under controlled conditions such as "Defence only, show use of sidestep". Minimum age for the elementary test is 10. Besides a new booklet revising the standards scheme, another is available in the "Know the Game" series from EP Publishing, East Ardsley, Wakefield, with the title, *Amateur Boxing*. In the foreword, Wilf Young, former chemistry master and now secretary of the SABA, points out that no boy is allowed to box competitively unless he belongs to the ABA medical scheme.

In-service cycling

Awards, but for teachers not pupils, are for the winning in the cycling world. The English School Cycling Association, in conjunction with the British Cycling scheme, last year launched a teaching certificate course.

Though the venues and dates of these courses have yet to be set, one or more will certainly be held on Eastway track in east London. May all information about the scheme be sent to the national coach, N. Greenfield, 157 Kingsway, Weston, Southampton.

Paying by the year

The winter run of the Amateur Athletic Board from O'Grada to Land's End has been after breakfast for the winter of 1983-84. The winter run of the Amateur Athletic Board from O'Grada to Land's End has been after breakfast for the winter of 1983-84. The winter run of the Amateur Athletic Board from O'Grada to Land's End has been after breakfast for the winter of 1983-84.

Getting there

Map-reading for infants is a new idea, according to the Orienteering Association. It involves introducing children to a simple navigational problem in their own locality. Mr James Marland of Liverpool, a school of education, is familiarizing the children with their own maps. It starts from the easiest materials they will meet, and then moves on to more complex materials. The children are encouraged to use their own maps.

It's easy to find your way to Marland, School of Education, University, 19 Abercrombie, Liverpool, 75p.

Bert Lodge examines current thinking about the role of the Church in independent education

Why the parson turns his nose up at public schools

Will the day come when not a single dog-collar can be found among the Old Boys ties in the masters' common room?

Dr John Rae, the head with a well-known nose for controversy, hinted it was beginning to happen when he spoke to the prep school conference last September. Signs were that the Church of England was beginning to stand off from private schooling. Why else would the Bishop of Taunton have written a report for the Headmasters' Conference, due to be published later, on the problems of lecturing school chaplains?

By then the two - each in a different school - had met in Ripon, north Yorkshire, where the Bishop of Taunton had covered and last year 38,000 children raised £200,000.

Getting there

Map-reading for infants is a new idea, according to the Orienteering Association. It involves introducing children to a simple navigational problem in their own locality. Mr James Marland of Liverpool, a school of education, is familiarizing the children with their own maps. It starts from the easiest materials they will meet, and then moves on to more complex materials. The children are encouraged to use their own maps.

It's easy to find your way to Marland, School of Education, University, 19 Abercrombie, Liverpool, 75p.

For the 950 boys and girls at Oakham, a senior chaplain to one already there was sought in February. There were 20 to 25 applicants, but as Mr Richard Bull, head, observed, most were over 45, married with children.

This could be a trend which



Dr John Rae: Keeping Christians values

would rightly concern the independent schools. For muscular Christianity in the benevolent sense, young men are needed. Yet to his report the Bishop of Taunton explains there has been a resurgence of clerical commitment particularly from the newly ordained, to the challenge of working in a parish. "There is now no such thing as a quiet country living. Rural areas invariably consist of groups of parishes which are seen by younger clergy increasingly as demanding opportunities which will stretch their abilities to the full."

A comfortable flow of candidates for jobs in schools still looks assured (and with a parson's living at not much more than £5,000 a year compared with Burnham, it can be expected) yet it should not conceal a significant strain of antipathy to private education among some clergy. For one thing more, and more of them did not go to private schools themselves.

This does not include their most elevated spokesman, the Rt Rev David Sheppard, Bishop of Liverpool, the title of whose latest book, *Blas to the Poor*, makes clear his lack of it towards the rich. Public schools should be done away with, he reckons, though like most of the Lords Spiritual he went to one, Sherborne School, Dorset.

Close behind comes Canon Eric James of St Albans Abbey, the director of Christian Action, whose arguments are largely those of R H Tawney, pioneer intellectual of the Labour movement. Public schools are a system of social segregation, said Tawney. How can the clergy then preach St Paul's words that we are "members one of another" and "all one body" asked Canon James in a letter to *The Times* last September, if they are doing it from public school pupils?

Chaplains-in-residence have defended themselves with sleeves rolled up. "Privileged? Where do any of us stand in relation to an Indian peasant?" asked the Rev Ian Ogilvie, of Malvern, chairman of the Chaplains' Conference, in a letter to *The Church Times*. And added, "Have we a right to say how people should spend their money?"

The Rev Brian Stowe, Ellerslie School, develops the "privilege" argument in the school chaplains' newsletter. "On these grounds, clergy should only minister in deprived areas and the Church should abandon all the smarter residential districts. But even this is but a partial view of the situation. Logically the Church should abandon concern for wealthy Britain and devote all its manpower and resources to ministry in the poverty-stricken Third World."

And the Rev D W Cooling, secondary-modern educated, 11 years teaching in a comprehensive, now chaplain of Epsom College, concluded with, "The presence of the Church in independent schools is not an advocacy of privilege or social division any more than prison chaplains advocate crime or hospital chaplains disease."

Stout defenders, all. Yet not a month after John Rae's speech to the prep school masters, the Church of England announced that a working party was to be formed to establish "a more permanent liaison between the Church and the private sector".

The push undoubtedly came from the public school side with the Church of England agreeing, "If you've no money, have a conference; if you've no commitment, agree to a working party," was the comment of one non-sympathiser.

But as Sir James Cobban, former head of Abingdon and subsequently deputy chairman of the Governing Bodies' Association, a member of the working party, points out, the Church is too deeply involved in independent schooling to just walk away from it.

The 26 schools in the Woodard Foundation, Lancing being the flagship, pioneered in the last century by the Rev Nathaniel Woodard, were institutions where boys would be taught the Christian faith according to the Book of Common Prayer. Nothing more Church of England than that.

Many of the remainder, probably the majority, are Anglican, if not by foundation, then by usage and tradition and make a point of saying so in their advertising literature. They do wisely. They are after all in the marketplace meeting customers' needs. Their consumer appeal was exemplified in a letter to *The Church Times* last November from Mrs Doreen Taylor of Chard: "My



husband and I chose King's School, Canterbury and St Mary's, Wantage for our children not for snobbish reasons but because we knew they would get a sound Christian upbringing - which is more than we could say for the state school where the headmaster was an atheist."

Sentiments not very different from those of Squire Brown as he put his son Tom on the stagecoach to begin his famous schooldays at Rugby. "If he'll only turn out a brave, helpful, truth-telling Englishman and gentleman, and a Christian that's all I want."

There ought to be a role in that for the Church somewhere, think Dr Rae, Sir James Cobban and quite a few others.

Our Spectrum comes with something no one else can offer

In ALL Primary Schools purchasing under the DoI scheme

you get:

- a FREE copy of LOGO computer language
- 10 Sinclair vouchers, each entitling you to:
- EITHER an additional ZX Spectrum 48K at the SPECIAL PRICE OF £107.17 (incl. VAT)
- OR a FREE printer with each further ZX Spectrum purchased at the full price of £152.17 (incl. VAT)
- PLUS £15 worth of FREE GOODS from the Educational Supplies Catalogue, to ALL schools, including those with vouchers received under the DoI scheme, redeeming them with E J Arnold.

More Details

For further details on this offer, and a free copy of the E J Arnold Computer Catalogue, complete and return the coupon, or telephone (0532) 772112 extension 2000.

Please arrange to send me: ☐ E J Arnold's 1983 Computers in Education Catalogue ☐ Details of ZX Spectrum 48K Special Deal ☐ (tick box)

Name _____
Position _____
Address _____
City _____
Postcode _____
Tel. _____
E J Arnold & Son Limited
The School Computer Service, FREEPOST,
Parkside Lane, Dewsbury Road,
Leeds LS11 9TY
TES2

SCHOOL TO WORK

Builders lay the ground for big YTS programme

The construction industry has decided to put virtually all its apprentices and other school leaver trainees through the Youth Training Scheme.

It will do so through a nationally-run programme which dwarfs any of the other projects so far put forward for the YTS. The construction training scheme, which will involve every kind of firm in the industry, from huge civil engineering companies to small jobbing builders, aims to provide 20,000 places for trainees from September this year (August in Scotland).

Two out of five will represent the trainees who would otherwise have been taken on by employers, and the rest youngsters rescued from the dole queue.

The scheme is to be run on behalf of the employers by the Construction Industry Training Board, which is likely to become by far the biggest managing agent in the YTS. It will draw something like £40m from the Manpower Services Commission, out of which it will pay the trainees allowances and the cost of training them. The board will offer no other training courses to school leavers.

Employers choose the trainees, arrange for their off the job training at colleges and training centres, and place them with employers for work experience. This is a pattern of management which is being adopted in other industries, only where employers lack the resources to take responsibility themselves for sponsoring trainees.

In fact, one section of the construction industry - electrical contracting - is insisting on keeping the overall responsibility for its trainees. Its employers have signed an agreement with the union under which

youngsters will be taken into employment and have to serve a probationary spell before signing up for apprenticeship under the YTS.

The board will still act as managing agent and arrange the off the job training for the electrical trainees, but another group of specialist employers, the plumbing companies, have decided to stay out of the industry's scheme altogether.

The training provided by the board will vary from sector to sector, and fit in to the longer training programmes already established. Outside the electrical scheme, trainees will only be told at the end

Edited by
Mark Jackson

of their YTS year whether they are going to be kept on for further training and employment.

Agreement on the scheme follows a long series of often-stormy discussions between the commission and the board, who are still involved in a bitter row about the funding of past training schemes.

The board's chairman, Mr Leslie Kemp, announced late last year that the industry would only cooperate in the YTS if it were left a completely free hand to decide on the content and standards of training, and that it could not in any case afford to pay colleges for the further education involved.

In the event, the board appears to have agreed to pay the same college fees as other employers, and to accept the MSC's criteria for foundation training, in return for being allowed a free hand in the day-to-day running of the scheme throughout the country.

MSC pressed to rethink course limits

Local authorities are trying to persuade the Manpower Services Commission to reconsider its decision to limit Youth Training Scheme college courses to 13 weeks.

Leaders of the Association of Metropolitan Authorities have told Mr David Young, the commission's chairman that the decision, which has aroused consternation in colleges since its disclosure by *The TES* last month, will make it impossible to provide a large group of leavers with the training and education they need.

They have drawn particular attention to the plight of those who need many months of remedial work before they can progress to ordinary training.

The courses in question are not those being paid for by employers who take on YTS youngsters, but rather those to be run under what is called Mode B, where the college acts as sponsor and gets its fees directly from the MSC.

The colleges take responsibility for finding work experience placements for their trainees, and the AMA is pointing out that many will be in serious difficulties if they have to find placements for nine months of the training.

Local authority associations and the commission are on the point of finalising an agreement on a national scale of college fees for Mode B. It will be significantly higher than the scale agreed for charges to employers sending trainees to college under Mode A - the Mode A fees are discounted to allow for the savings authorities expect to make because they will have fewer traditional apprentices to educate.

Mode B fees will be based on averaging out the full cost of courses, and will be charged by the course hour.

Commission sends out brief pack

A pack containing two leaflets and a few posters is being sent out by the Manpower Services Commission on Monday to schools throughout Britain. It is the commission's way of briefing teachers on the Youth Training Scheme which begins at Easter.

The commission is spending £1.5m on a mass advertising campaign to sell the three-month-old scheme to employers. It intends to spend the same amount on briefing youngsters and their parents with a campaign beginning next month which will include television commercials, but there is no plan to advertise to teachers.

Commission chiefs agree that teachers may have an important role in advising youngsters but say that they can get their information from careers service.

The material in the pack has, in fact, been produced mainly for use in careers offices, and a short covering letter directs schools to go to the careers service for further information.

Mr Norman Stone, the commission's marketing chief, says that he will wait to see what effect the pack has before deciding whether to do anything more about the schools.

The MSC consulted the Department of Education and Science before deciding to send out the 11,500 packs, its first direct mailing to schools.

Mr Ray Hurst, secretary of the Institute of Careers Officers, said this week that in most part of the country careers departments were already running their own briefing sessions and seminars for teachers, pupils and parents.

He thinks this is preferable to a system of direct briefing by the MSC, because the careers service can be relied on to give unbiased information and advice, and also to point out the limitations of the scheme.

Career Diary



by Brian Hay

It may be the pressure of preparing more to the point, to the suits of A level mock examinations, but either way this is a busy time of year when thoughts are often turned to the idea of having a "year out".

It is a sound enough idea if properly planned and executed. Most college and university tutors go along with the principle, the exceptions being those subjects such as mathematics and physics in which a certain continuity might be deemed to be in fact, is the important question, ask oneself, irrespective of whether to be studied.

A twist to the idea is given by a number of sixth-formers who, after A levels, have full-time employment in the field, only to find that the not suit and so they leave at the end of the year to go on education.

The usual reason for year out is often to come with the "real world" opportunity exists then to the Simon Community - for the caring on Skid Row.

deal with such problems as drug addiction and disorders - the people in men and women, young Simon workers live on the terms as Simon residents - their poverty, which means living out of a sleeping bag on the office average working day in there is one day off every 10 days' leave every three weeks with a weekly allowance plus a tobacco allowance.

attracted to the idea about the Simon Community, 129 House, 129 Maiden Road, NW5.

Other ideas about schemes are to be found in *Between*, a Hobson Press publication (Bateman Street, Cambridge) the *Directory of Jobs and Abroad* (Vacation Work, Post Street Oxford).

Many sixth-formers are attracted to social work in its various forms and for those interested in the Christian service, two Easter holidays are being arranged. They will take place at Jesus College, Cambridge (April 6-9) and York (April 12-15).

The conferences and visits are for students of both sexes and of any denomination. The cost of £18 is in part accommodation and meals - and applications should be made by March 16 to the Secretary, Vocation Adviser, ACCA, 100 Vocation House, Dean's Yard, London WC2A 3NZ (Tel 01-222-9011 ext 20).

Finally a reminder for teachers involved with computers, about the two Salford University conferences "Structured Programming with Pascal" (March 28-30) and "Computer Micro-computer" (four courses over two days each from March 20 to April 19). There are also two courses for teachers who use computers in block chemistry and mathematics. Details about all these courses are available from the Conference Office, Room 327, Salford Building, University of Salford, Salford, M6 6PU. (Tel 0161-275 4449).

Clerical studies: Darren Hurst, 17-year-old, former headboy at Maningtree School, Ayrshire, has become the first teenager to train in the Church under the Government's Youth Opportunities Programme.

During his six months on the scheme, Darren will be supervised by the Rev Peter Hall (above), the Rector of Lawford, and will visit parishes in the area.

He will also work in the Diocese of Colchester and Chelmsford, while studying for his O level in religious education. Darren's ability to type has been put to immediate use; he is helping to prepare Lawford parish magazine. Last Sunday Darren read the prayers during the service at St Mary's, Lawford.

help with general administrative work in the parish.

Keel conference: A conference on "14-18: the vocationalism in school education" was held by the Association of Teachers in the Social Sciences in conjunction with the Keele University Department of Education (details: Denis Gleeson) at Keele, September 22-25.

OVERSEAS

Striking while the ire is hot

UNITED STATES

The longest teachers' strike in the history of the United States, lasting 82 days, ended recently in Pennsylvania. Teachers have agreed to a new contract with the local school board but are appealing against court-ordered fines of \$3,000 (£1,900) each.

In Montana some 30 principals and school administrators recently went on strike for four days over a seniority and pension clause in their new contracts. The principals accepted the school board's terms.

However, classes are open in Canton, Ohio, despite a strike by 120 teachers over its fourth week, and in New York 1,000 teacher layoffs were averted after the city and the state reached a compromise allocating an additional \$9m of state funds for the school district.

A 4 per cent spending cut for education in West Virginia will go through despite efforts by the state teacher's association to overturn the governor's order in court. Meanwhile, in Illinois, a similar suit has successfully blocked that state's plans to cut \$159m in education

selective programmes, personnel cutbacks, and leave.

Permanent and temporary revenue-raising measures have been adopted by 39 states, some of which have imposed hiring limitations and layoffs.

The Governor of Ohio is calling for \$190m in cuts for elementary and secondary education in the face of a \$328m deficit, lower oil and gas revenues in Oklahoma will leave school districts \$30.5m short, while higher education and human services budgets in New Jersey will share a \$30m shortfall. Similar cuts are underway or have been announced in Rhode Island, Iowa, Nebraska, and North Carolina.

In their report the Governors' Association commented that "a recessionary wallop" had hit the entire country, with the traditionally immune "sunbelt" suffering as much as the frostbelt region. "Only a handful of states show improved balances in fiscal year 1983."

The governors concluded that this, their ninth annual report, "is by far the bleakest yet."



A digital watch on the runaways

From Charlotte Byers in California

These boys are being finger-printed for a youth identification programme, a voluntary project set up by the Redwood City Police Department, in California.

Sergeant Bill Pratt (above) started the project at the request of Mrs Donna Herbert, a local mother who thought the prints could help police to locate and identify runaway children and kidnap victims.

Sergeant Pratt said: "Finger-prints are a fast means of identification and they give that little extra sense of security to parents." More than a million youngsters run away from home each year, he said.

In nearby Castro Valley, prints are being taken at schools. Parents are to keep one set, while police retain another. Sergeant Pratt thought it unlikely that the prints would be used if a child were to break the law.

Workers get to learn

Si Lanka has set up a Workers' Education Association believed to be the first of its kind in Asia.

It was introduced by Mr P A Nock, director of the International Labour Organisation (ILO) for India, Sri Lanka and Bhutan, who said that Sri Lanka was playing a leading role and should inspire labour organisations of other countries.

The association has brought together 14 trade unions, federations and three other institutions which are involved in worker education.

D-B Udugama

Second chance: More than 10,000 adults in Sweden taking primary schools courses again because they lack the knowledge to cope with everyday life, a report by the National Board of Education says. Most are aged between 25 and 34, and a third dropped out of primary school as children.

Johnnie George

JAPAN

Axe poised on 8,000 jobs

More than 8,000 teaching jobs will soon be axed if proposed amendments to the 1983 education budget are accepted by Parliament.

This latest, tough measure, which is expected to save \$56m, excludes 3,000 jobs already threatened by the original budget proposals.

Nearly half the jobs will be lost by increasing class sizes in primary schools to 32 (4,100 jobs). There will be extra money for schools with large numbers of disadvantaged children, and this will create 625 extra jobs. Other jobs will go by reducing the number of secondary school teachers by 3.5 per cent (2,100 jobs), and phasing out physical education in the top classes of three secondary school types (900 jobs).

Johnnie George

Failing to stay the course

SOVIET UNION

Kenneth Shaw on the drop-outs

Too many youngsters are failing to complete their prescribed 10-year education courses in the Soviet Union, especially in the outlying republics, and education experts are at a loss to explain this phenomenon, according to a Ministry of Education report. In addition, many students are passing their exams but are failing to find work suited to their abilities and qualifications.

One of the bright aspects of Soviet education, according to the report, is that more young Russians are leaving schools and entering technical education. Soviet planners are especially conscious of the need to give all youngsters a job to maintain the promise to keep full employment at the top of the list of political and social priorities.

However, teacher training colleges seem to be incapable of dealing with the urgent problems now facing Soviet education. These establishments, asserts the report, should pay more attention to the rational deployment of young specialists leaving the training colleges. In some republics the gap between the plan and the actual conditions is too great.

One way out, according to some Soviet commentators, is to pay teachers and teacher trainers more money and to attend to their social needs.

It is expected that 1983 will see more resources being devoted to the extended day, to the provision of more pre-school places, and closer links between industry and schools.

All these requirements will put more stress on school teachers, and Soviet planners are beginning to look more closely at the working conditions of Russian teachers in the classroom. It seems that the status of the humble classroom teacher in Russia is to receive a long awaited

TURKEY

The race is on and the stakes are high

Bernard Kennedy on the scramble for school places.

The competition for places in Turkey's special high schools has been brought to the Government's attention, with claims that 10 and 11-year-old children are being turned into "race-horses". The issue sheds light on peculiar discrepancies within the national education system.

The high schools range from prestigious institutions where most teaching is carried out through the medium of a foreign language, such as Istanbul's Galatasaray Lycee, to non-paying grammar schools within the state sector known as Anatolian Colleges. High school starts at the age of 14, but, as many schools have their own middle schools attached, competition for places begins at the age of 10.

Examinations for entry have been compared to the national lottery - with good reason. The growing demand and the relative lack of new places means that less than one candidate in ten is likely to be accepted this year. The "science high schools", for example, are offering only about 200 places - some 40,000 children have applied for them.

So although the special schools - public and private - appear relatively insignificant in terms of numbers (altogether they have no more than 10,000 places a year to offer), their existence affects a wide sector of the Turkish population. Parents keen to ensure that their offspring learn at least one foreign language well and subsequently go on to university, are prepared to spend large sums on private lessons, for the examinations contain questions not catered for in the national primary school curriculum.

The pace is increased by population growth and a "keeping up with the Joneses" attitude among parents. In the short term, the authorities seem to have no answer to this problem. Mr Hasan Saglam, the Education Minister, has pointed out that the education provided in the special high schools is not suitable for everybody, but he was also forced to admit that the quality of foreign language teaching in ordinary state high schools was inadequate.

In the longer term, the ministry is hoping that more special high schools will be opened. There are plans to set up at least three more Anatolian colleges, while an important bill on private schools now

under preparation may lead to an increase in the number of private institutions - as well as tightening up the rules under which the private cramming schools which prepare children for the all-important examinations are permitted to operate.

Meanwhile a highly critical report of the country's entire education system is being prepared by the Turkish State Planning Organization. The report criticizes old-fashioned methods and the inadequacy of provision for practical subjects at all levels, as well as suggesting that the failings of the education system were partly responsible for the breakdown of law and order in Turkey in the late 1970s.

In primary schools (the only level at which education is compulsory), says the report, children are not taught the skills appropriate to their environment, while middle school education (for 12 to 15-year-olds) is still incapable of producing enough qualified young people to supply the needs of the nation. As for the universities, they are said to be engaged in an "out-dated repetition of programmes applied in western universities".

The anarchy and danger to national unity of the 1968-80 period is widely believed to be linked to the present education system, the report continues.

Few Turks or foreign observers here will be surprised by these conclusions, although the fact that they are contained in a report by a leading public body could lead to a wider debate on education in Turkey.

Travel

A MATTER OF STANDARDS

Since we started very modestly in 1967, we've set new standards in all aspects of travel to the cities we cover.

First in the series of essays on travel cities is another example of these standards.

Cradle of Consciousness by Peter Newbold, on Geneva, is original, intelligent, informative, interesting and charmingly illustrated by Liz Heber. It also does credit to its subject - a rare accomplishment indeed in the field of travel. We try to bring the same high standards to our holidays - this is your best recommendation.

Time Off simply the best for individual travel to Paris, Amsterdam, Brussels, Bruges, Geneva, Luxembourg, Bologna, Digne and Rome. To receive your free copy of *Cradle of Consciousness* write or phone:

TIME OFF

2a Chester Close, Chester Street, London SW1X 7BQ. Telephone: 01-235 8070

1983 sees the renewal of our Battlefield Tours to Ypres and the Somme, accompanied by the author and historian LYN MACDONALD.

Also - new this year - holidays to Normandy including the 1944 Landing Beaches, Bayeux and Mont St. Michel.

Full details from P/O FLAG TRAVEL, Beaufort House, St. Botolph Street, London EC3. Tel: 01-247 0666.

1983 sees the renewal of our Battlefield Tours to Ypres and the Somme, accompanied by the author and historian LYN MACDONALD.

Also - new this year - holidays to Normandy including the 1944 Landing Beaches, Bayeux and Mont St. Michel.

Full details from P/O FLAG TRAVEL, Beaufort House, St. Botolph Street, London EC3. Tel: 01-247 0666.

1983 sees the renewal of our Battlefield Tours to Ypres and the Somme, accompanied by the author and historian LYN MACDONALD.

Also - new this year - holidays to Normandy including the 1944 Landing Beaches, Bayeux and Mont St. Michel.

Full details from P/O FLAG TRAVEL, Beaufort House, St. Botolph Street, London EC3. Tel: 01-247 0666.

OVERSEAS

Gradually closing the education gap

CANADA

Figures show that Canadians are becoming better educated. Les McLean reports

Canadians have become better educated over the past 10 years, according to early results from the 1981 census. Among those over 14 years of age, the percentage with less than a grade 9 education fell from 33 per cent in 1971 to 22 per cent in 1981. At the same time the percentage with a university degree went up from 4.8 per cent to 8 per cent.

Statistics Canada defines the "education gap" as the ratio of the number of people with less than a grade 9 education to the number with university degrees. This gap has steadily narrowed: 7/1 in 1971 to 4/1 in 1976 and 2.7/1 in 1981.

The gap is still wide, however, in

view of the fact that grade 9, - that is, with at least eight years of schooling, - is regarded by UNESCO as the minimum necessary to reach a level of functional literacy.

School rolls will continue to fall for at least five more years, since the birthrate continued to drop

through 1981. This was true in every province but was especially marked in Quebec, where the decline has been sharper than the national average since 1961.

There is concern about this in Quebec and over the fact that it has experienced the greatest emigration of any province.

Canada's labour force grew by 40 per cent since 1971, but the proportion of people attaining some form of vocational or trades certification fell slightly - from 13.1 per cent to 12.2 per cent. Some provinces suffered high unemployment with Newfoundland showing a 100 per cent increase.

There was a small trend of students remaining at school longer (completing grade 11, 12 or 13) before going on to a trades course. This trend is expected to continue as course content becomes more technical and demanding.

Schools, especially in cities, have been signalling for some years that they face special problems with children from single parent families. The census showed that single-parent families increased by 24 per cent over 10 years, now comprising 11.3 per cent of all Canadian families. Many were surprised to learn, though, that in 1931 the percentage was 13.6.

CHINA

Agriculture reform gets priority

Agriculture and rural development will receive priority in educational reforms which China is introducing, to make education serve more effectively the needs of the economy.

Mr Hu Dongchang, the Education Minister, told a ministry meeting that China must reorganize its educational system to cope with the nation's modernization, and to provide qualified workers in many areas.

The aim was to get the greatest return in terms of national construction. Mr Hu said education would have to adapt to meet the requirements of heavy and light industry.

But it is agriculture which the authorities consider the most important sector of the economy needing educational reform.

Although the rural economy has developed rapidly in recent years, its education lags far behind the demands, and speedy reform is needed to develop agricultural production and build up a prosperous countryside.



The reforms, recently approved by national and local education departments and official planning and policy bodies, include:

- Structural change for secondary schooling, to conform with rural development;

- Rural educational reform to lead gradually to the formation of a completely new system, which would include agricultural science;

- Putting a stop to high school graduates leaving rural areas once they have qualified for a college education; and

- University training for specialists and teachers in the countryside, and research in agricultural science and technology.

In addition, reforms in higher education announced last month give priority to rural development. From this year, a lower pass mark will be set for college entrance examinations for candidates who apply to study teaching, agriculture, forestry and medicine, and who are willing to work in the countryside.

Students from rural parts who want to return home to work on graduation will receive preference.

Jane Marshall



Public display: a hammer in the Grenadian capital St George's.

Throughout Grenada, which this month enters the fifth year of its socialist revolution, wall posters exhort the populace to study.

"Education is production too," proclaims one. "Study and learning are regular habits of a conscious people," declares another. The billboards underline the government's determination to expand educational opportunities, a task it sees as vital for the impoverished island's social and economic advancement.

Grenada's literacy and adult education classes - held at a country-wide network of Centres for Popular Education (CPEs) - consciously aim not just at enhancing academic skills, but also at fostering a sense of national and regional pride and identity, and at encouraging a personal commitment to the revolution and the drive for accelerated national development that is one of its key themes. The same approach characterizes the rest of the education system, and was highlighted by the designation of 1983 as Year of Political and Academic Education.

CPE classes have a distinctly political flavour - lessons drive home the objectives of the People's Revolutionary Government. The basic textbook, *Let Us Learn Together*, a 14-lesson literacy reader prepared by Grenadian teachers familiar with local circumstances, includes lessons such as "The land of struggle" and "Our history through such phrases as 'We are from the Caribbean' and 'We are one Caribbean'".

This may sound austere, but classes are not. One of the largest of the 85 CPEs opened so far is at Queen's Park, on the edge of the picturesque capital, St George's. Here, some 200 students - many

from the depressed River Road suburb nearby - gather for three hours, two evenings a week, for lessons in a complex of low prefabricated huts that by day function as a community centre. The atmosphere is: surprisingly informal - one mother regularly brings along her small baby. The relaxed relationship between teachers and pupils, and the students' pride and enthusiasm, are plain.

The CPE programme is voluntary, and lessons and books are free. The volunteer teachers - many but by no means all primary school teachers by profession - receive only token remuneration.

The first phase of the CPE programme started in August 1981 and continued until February 1982. It aimed at teaching basic reading and writing skills, but met with considerable

resistance because of its avowed concern with literacy. Older Grenadians were reluctant to attend classes that they felt would stigmatize them as social inadequates.

The programme was accordingly reorganized, and the revamped phase two was inaugurated last October. CPE students now follow a full primary school syllabus, starting with reading and writing.

In 1979 about 15 per cent of adult Grenadians were illiterate; the figure has already fallen to 5 per cent, according to the Government. Four years ago, however, functional literacy - an inability to read to write any but the most simple words and phrases - afflicted about one-third of the adult population, and it is at this problem that the current phase of the programme is mainly directed.

Successive extensions to the CPE syllabus are planned. In September it is hoped that students who pass the school leaving certificate, marking the end of the primary school courses, will go on to study for O levels. Longer-term plans call for the introduction of technical training. There are also plans for the provision of crèches - an important requirement in a country where almost half of all families are single-parent.

There was early resistance to the CPE classes but this appears to have evaporated. So far this year some 4,500 adults have registered in the programme, and Grenadian trade unions and other grassroots organizations, such as the National Women's Organization, have set themselves the task of increasing enrolment to 10,000 by the end of the year.

How it works out after the university years

ITALY

Rita di Guiseppe looks at who gets jobs among the country's graduates

Italy's most recent national statistics indicate that more than 200,000 people were enrolled at university in 1982. Only an estimated 70,000 will graduate after the prescribed four years. Where they go after graduation has been the object of a recent study conducted directly by the Ministry of Education.

The survey is a response to the complaints from all sectors of the labour market that education is little

concerned with the supply and demand of intellectual employment, and indicated primarily that university graduates have an edge on non-graduates when it comes to finding a job.

Of the graduates, however, the study disclosed that a scientific or technical degree offered more opportunities on the job market (2 per cent unemployed) than non-technical or humanities degrees (10 per cent still seeking permanent employment four years after graduation).

The ministry's findings proved that engineers, veterinary and agriculture graduates lead the pack in finding employment within a year. They are followed closely by graduates in medicine, business/banking administration and economics.

Of the arts graduates, some are either precariously employed or out of jobs for years, with only law and political science offering the prospect of permanent employment, mostly in the civil service.

In fact, the survey shows that approximately 35 per cent of all Italy's graduates become civil servants, more than double the amount (15 per cent) absorbed by industry.

Worst off are women (51 per cent employed compared to 81 per cent of men) who continue to be attracted to the already-glutted teaching profession; and graduates from the southern regions (63 per cent compared to the high 81 per cent employment rate in the industrialized north).

The survey, an important "first"

Plea for vocational schooling

INDIA

India's Education Ministry is urging provincial governments to make higher secondary education more vocational during the coming year.

The federal authorities have commended the example set by southern state of Tamil Nadu, where the federal government's own role in the matter is hardly exaggerated. The Union territories are under direct sway, yet vocational education has made little headway.

The Central Schools Organisation, another federal body which runs a chain of schools with a form syllabus for children of 14 to 16, has also been urged to make no better. In 1977-78, it had vocational courses in dressmaking, furniture-making, and in bookbinding. There were no more and the courses were withdrawn.

The Federal Education Ministry now plans to set up an All-India Board of Vocational Education under the supervision of the All-India Council for Technical Education, to devise vocational programmes and help provincial education agencies to implement them.

The National Council of Educational Research and Training (NCERT), a Schools Council body, will also, with the Union government's help, evaluate the state's experience in the changes. A S. Akshay

SPAIN

£90m boost for budget

The Spanish Education Minister Jose Maria Maravall, has proposed an economic package designed to rescue the service from accusations of bloating and inefficiency.

Another £90m will be added to the already increased education budget and the lion's share of the bonanza will go to primary and secondary teachers. Some £70m will be used to narrow the long-standing gap between their earnings and those of equivalent ranking civil servants. Irrespective of this, the measure teachers will benefit from an all round civil service pay rise of about 12 per cent.

The Minister has also announced that universities will be expected to present their own budgets for the next financial year. In future, lecturers' class pay will be published and each department will be expected to present an annual memorandum.

In schools, staff appointments and class work will be subjected to a rigorous inspection. James Connolly

Springing the language trap

Sir - I was delighted to read Professor Roy Harris's "Second Opinion" (February 25). If his only serious criticism of the argument of my pamphlet *The Language Trap* is that the standard English to which I would give all pupils access simply does not exist, then that is an objection which is easily disposed of.

If it were valid, it would render impossible the whole industry of teaching English as a Foreign Language. It is perfectly true that, as Professor Harris shows with examples like *different from*, *to and then*, there is a margin of disagreement about what constitutes the "correct" or "standard" form, but the cases that are at issue here constitute a mere fraction of 1 per cent of the utterances which are in daily use in contexts where standard English is considered appropriate. No teacher, whether of English-born or foreign pupils, has any difficulty in identifying the standard forms which correspond to the dialectal *we wants* or *we done*.

It is understandable that an expert in Romance linguistics should cite countries like France where the Academy has attempted to codify the standard language, but the absence of such an authority in Britain does not deprive us of a reasonably effective-of-thumb definition of standard which reflects the consensus of educated usage. The traditions of English usage, maintained - as Haas (1982) has put it - by "continual normative judgments", are documented by dictionaries and reference books and updated by authoritative grammarians like Randolph Quirk and his collaborators. So while I concede that Professor Harris makes an important theoretical point, it is barely perceptible as an obstacle in practice.

If Marion Whitehead ("Letters", March 4) can bring herself to read *The Language Trap*, she will find it says much that she can support, though she and other correspondents who reproach me for the term "sinister clozapine" will also discover that nowhere in the pamphlet do I use that term. And if R A Leeson reads it, I think he will come to acknowledge that the pamphlet, so far from being a "right-wing diatribe", is in fact a passionate plea for the linguistic rights of the underprivileged.

PROFESSOR JOHN HONEY
School of Education
Leicester Polytechnic

Deprivation cycle
Sir - I have the impression that many of those reacting so intemperately to John Honey's pamphlet *The Language Trap* have not yet

divided school and the common curriculum, we should not favour initiatives which patch up a "best versus the rest" system of education. This is emphatically not the way to secure a worthwhile education for the majority. *Panorama* showed us eager teenagers slicing meat and getting down to work on machines thrown out by FE colleges because they are irrelevant to industries which are becoming more automated and specialized. This keenness was a good example of the Hawthorne effect: put anyone in a new environment and their engagement and interest increases - temporarily.

If the criterion of worthwhile activity is in no way whether children like it, then the cheaper and equally effective model we were shown - that of the Ivants also comes into account. But is this what we want? Should we not be pressing for a reform in the system of examining and selection which creates the problem in the first place?

Sir Keith is sound and almost eloquent about the "40 per cent". What he fails to mention is that he is an ardent supporter of the apparatus which creates their discontents. It is to be hoped *The TES* will not line itself up with him by default.

W A REID
New Road
Cannal
Kidderminster
Worcestershire

Tools for the job
Sir - I note that you describe my appointment to the new Secondary Examinations Council as being "controversial" and cite only my association with the Black Papers in support of that adjective.

Putting aside the fact that the Black Papers represent the most radical and fundamental thinking on educational issues of the past decade and a half, your readers may be interested to know that I have been an A Level examiner for over 20 years and a chief examiner for 24 years. I have written a number of articles on examining and given innumerable talks on the subject, and that I have advised the Standing Conference on University Entrance on examining in my own subject.

Further to all that, I have long experience in local government; and am currently chief opposition spokesman on education on Humberside County Council.

PROFESSOR ARTHUR POLLARD
Brough
North Humberside

Insult to injury
Sir - I share Mary Warnock's surprise ("Personal", March 4) that John Tyler should now extend his notorious remark about teachers in independent schools to parents who choose to educate their children privately (SIS newsletter). It saddens me to see an otherwise deeply committed and caring headmaster adding insult to injury in this way.

Having worked in a small private boarding school for several years, simply because it was the only source of part-time work while my children were young, I can assure Mr Tyler that "prostitution" would not be the world's oldest profession if it paid as little as private school teaching. My school paid Burnham rates; many do not.

Mary Warnock's fears about "fly-by-night" out-price private schools are equally ill-founded; this type will survive in a world where the mass media bombard the public with information about what to expect of a school. Parents who pay the piper expect a good tune for their money; if it is not forthcoming, pupils are removed and the school folds.

The true value of private schools today is to provide for the two groups of normal children who cannot be satisfactorily provided for within the state system. . . .

The first comprises those who are temperamentally unsuited to a large school, for whom even a friendly and well-organized comprehensive remains a nightmare.

The second group contains those for whom school has to be home as well. The boarding school head and staff have to be even more dedicated than Mr Tyler, for three-quarters of the year they must try to combine the roles of parent and teacher; their pupils do not take themselves and their problems home at 3.45 pm each day, discipline and support have to be given 24 hours a day.

Surely, Mr Tyler, you see we are all on the same side, and all in the front line, so please do not shout your allies in the back just because their uniform is different.

ELAINE LEVER
Bridge Farm
Lillingstone Lovell
Nr Buckingham

Divisive system
Sir - The TES has done a valuable job in putting the facts and arguments about the MSC's Technical and Vocational Education Initiative before the educational public. It is, therefore, sad to see the March 4 editorial in which it finally falls in line with the fudgers and timorers and suggests the best course of action is to take the money and run. There are three serious objections to such a recommendation: two practical and one based on principle.

The first practical argument to be levelled against this "pragmatic" approach is that it fails to take into account the consolidation of policies and initiatives of which MSC is only a part (though a large and significant one). Alangside efforts to check the development of sixth-form colleges, to stem the entry to higher education, to boost the private sector, to "introduce" voucher schemes, life skills curricula and so on, it contributes to a haphazard effort to reinforce a system of education as an instrumentally conceived, divisive force in society.

The second practical point is that we deceive ourselves if we think that all the schools which take MSC money will use it for enlightened ends. I have in front of me a proposal from a school which contemplates amongst much else which is instructive

and the school folds. The true value of private schools today is to provide for the two groups of normal children who cannot be satisfactorily provided for within the state system. . . .

The first comprises those who are temperamentally unsuited to a large school, for whom even a friendly and well-organized comprehensive remains a nightmare.

The second group contains those for whom school has to be home as well. The boarding school head and staff have to be even more dedicated than Mr Tyler, for three-quarters of the year they must try to combine the roles of parent and teacher; their pupils do not take themselves and their problems home at 3.45 pm each day, discipline and support have to be given 24 hours a day.

Surely, Mr Tyler, you see we are all on the same side, and all in the front line, so please do not shout your allies in the back just because their uniform is different.

ELAINE LEVER
Bridge Farm
Lillingstone Lovell
Nr Buckingham

Tools for the job
Sir - I note that you describe my appointment to the new Secondary Examinations Council as being "controversial" and cite only my association with the Black Papers in support of that adjective.

Putting aside the fact that the Black Papers represent the most radical and fundamental thinking on educational issues of the past decade and a half, your readers may be interested to know that I have been an A Level examiner for over 20 years and a chief examiner for 24 years. I have written a number of articles on examining and given innumerable talks on the subject, and that I have advised the Standing Conference on University Entrance on examining in my own subject.

Further to all that, I have long experience in local government; and am currently chief opposition spokesman on education on Humberside County Council.

PROFESSOR ARTHUR POLLARD
Brough
North Humberside

Insult to injury
Sir - I share Mary Warnock's surprise ("Personal", March 4) that John Tyler should now extend his notorious remark about teachers in independent schools to parents who choose to educate their children privately (SIS newsletter). It saddens me to see an otherwise deeply committed and caring headmaster adding insult to injury in this way.

Having worked in a small private boarding school for several years, simply because it was the only source of part-time work while my children were young, I can assure Mr Tyler that "prostitution" would not be the world's oldest profession if it paid as little as private school teaching. My school paid Burnham rates; many do not.

Mary Warnock's fears about "fly-by-night" out-price private schools are equally ill-founded; this type will survive in a world where the mass media bombard the public with information about what to expect of a school. Parents who pay the piper expect a good tune for their money; if it is not forthcoming, pupils are removed and the school folds.

The true value of private schools today is to provide for the two groups of normal children who cannot be satisfactorily provided for within the state system. . . .

The first comprises those who are temperamentally unsuited to a large school, for whom even a friendly and well-organized comprehensive remains a nightmare.

The second group contains those for whom school has to be home as well. The boarding school head and staff have to be even more dedicated than Mr Tyler, for three-quarters of the year they must try to combine the roles of parent and teacher; their pupils do not take themselves and their problems home at 3.45 pm each day, discipline and support have to be given 24 hours a day.

Courses

THE FURTHER EDUCATION STAFF COLLEGE
COOMBE LODGE
Blagdon, Bristol

The Further Education Staff College provides study-conferences and workshops for FE/HE staff; LEA Officers, Governors and those in schools and elsewhere concerned with the management of their institutions and with understanding the educational impact of MSC and other National agencies.

A programme to Easter '84 is available together with details of publications, association and other services.

Special theme programmes include:

- (1) Management in Colleges - a programme for efficiency and effectiveness
- (2) School to Work - the management of new policy
- (3) FE/HE and employment
- (4) Quality in the provision and management of FE/HE
- (5) The effectiveness of college government

Further details from the Registrar at the above address. Tel: 0781 62503.

The FE Staff College is organized as a charitable trust, Governors appointed by the Secretary of State supported by Local Authorities in England, Wales, Scotland and N. Ireland.

DEPARTMENT OF SOCIAL SCIENCES
Part-time Study

Applications are invited from suitably qualified candidates for the

MSc IN SOCIOLOGY

A two year part-time evening course specialising in either:

SOCIOLOGY OF EDUCATION

or

SOCIOLOGY OF HEALTH AND ILLNESS

BSc (HONS) IN SOCIAL SCIENCES

PART-TIME OVER TWO YEARS

DIPLOMA IN SOCIAL SCIENCES

PART-TIME OVER TWO YEARS

also MPHIL/PHD DEGREES BY

RESEARCH

SUPERVISION OFFERED OVER A RANGE OF

SPECIALISMS

For further details contact: Department of Social Sciences, Polytechnic of the South Bank, Borough Road, London SE1 0AA. Or Telephone: 01-828 8888, Ext. 2381/2.

POLYTECHNIC

OF THE

SOUTH BANK

NATIONAL UNION OF TEACHERS
SECONDARY HEADS ASSOCIATION
COMMUNITY EDUCATION DEVELOPMENT CENTRE

A RESIDENTIAL CONFERENCE

AT STOKES ROCHFORD HALL

STOKES ROCHFORD, NR. GRANTHAM

LINCOLNSHIRE

14-16 APRIL 1983

COMMUNITY SCHOOLS:
EDUCATION AND TRAINING
IN THE NEXT TWENTY YEARS

Speakers include:

Gerry Fowler, Bob Alken, John Woolhouse and Anne Jones. This conference will provide teachers, heads, education officers, elected members, trainees, community organisations and all others involved in or committed to community education, with the opportunity of explaining the potential and contribution of community schools and colleges to life-long education and training.

Cost: £60 (Inclusive)

Further details: CEDC, Briton Road, Coventry CV2 4LF.

Tel: (0203) 440814

CAMBRIDGE INSTITUTE OF EDUCATION
SPECIAL EDUCATION SUMMER SCHOOL

24-29 July 1983 - Jesus College, Cambridge

Intensive advanced level courses for those concerned with the education of pupils with special needs in mainstream and special schools. Topics include:

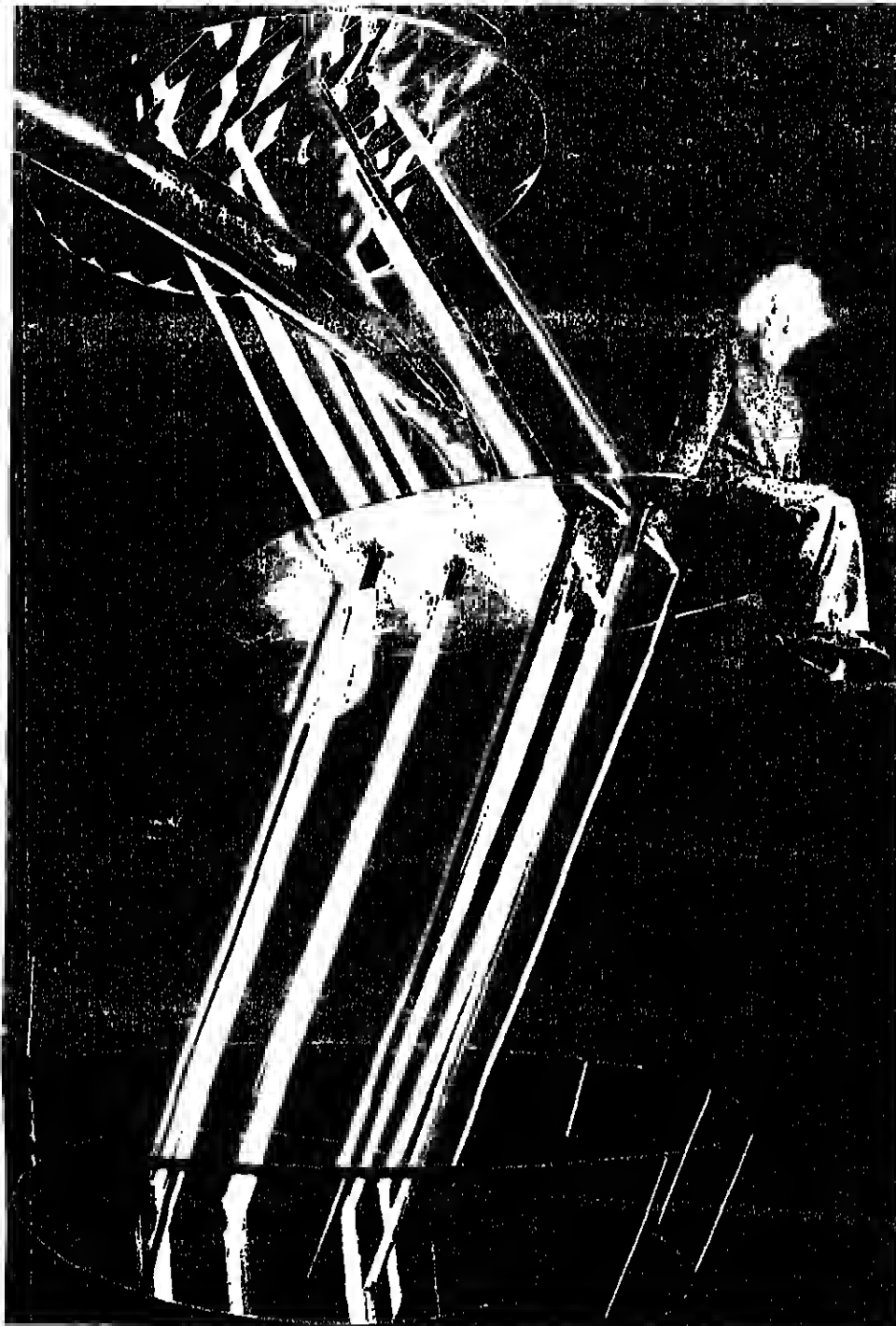
- * THE PLANNED TEACHING OF COMMUNICATION SKILLS
- * THE HANDICAPPED STUDENT IN FURTHER EDUCATION
- * DEVELOPING COUNSELLING SKILLS IN SPECIAL EDUCATION
- * TEAM DEVELOPMENT IN SPECIAL EDUCATIONAL SETTINGS
- * DEVELOPING BEHAVIOURAL PROGRAMMES WITH ADOLESCENTS
- * MALADJUSTED CHILDREN IN THE ORDINARY SCHOOL SYSTEM

Detailed brochure available from:

Courses Office, CIE, Shaftesbury Road, Cambridge CB2 2BX (0223 69631)

FEATURES

1965 stated the Nuffield Physics talks as renamed Basic Astronomy, for 15 to 16 weeks. In the latter he compares the different models of the universe centred on the earth or the sun and demonstrates the apparent motion of the stars. He introduces the meridian and equator and proves the earth is a sphere.



As London's commercial planetarium celebrates its silver jubilee, Peta Levi looks at its educational potential.

Ebdon concludes: "If I am interested I will give some teachers' my seminars. Generally, I would more feed back from teachers as to providing what they

LEAD
MAKES
KIDS
THICK

**The effect of lead on
is now established by
says Robin**

The effect of lead on children's intelligence is now established beyond reasonable doubt says Robin Russell Jones

Clearing the mind

**n children's intelligence
beyond reasonable doubt
Russell Jones**

Before corrections for social factors, lead related deficits of 5 points were established for both full scale and verbal IQ. After correction for a large number of factors (15 in all), the size of the deficit was reduced to 2.7 points. These results fell just short of statistical significance and the directors therefore concluded that they might be due to chance alone. Unfortunately, they went even further and in their handout claimed that they had "failed to replicate American findings".

All studies have shown an association between increasing lead and decreasing IQ, and none of the studies provides any evidence of a safety threshold. Recent data from America has demonstrated that the average contribution of lead in petrol of human lead intake is 57.5 per cent. Certainly, for children living in an urban environment the contribution is liable to be even higher than this. It follows that the elimination of lead from petrol remains the most important legislative act which would reduce current levels of lead exposure in the general population. Refusal to institute this measure when faced with the scientific data now available should be regarded as a serious betrayal of the public interest.

Dr Robin Russell Jones, MRCP, is deputy chairman of CLEAR, the Campaign for Lead-Free Air, and co-editor with Professor Michael Rutter of Lead versus health, sources and effects of low level lead exposure, John Wiley & Sons. Price £18.50.



Left: the planetarium's wax model of Galileo Galilei. Right: John Ebdon.

BOOKS

What's new from Batsford

'WORKING IN' SERIES

This excellent careers series for secondary school pupils points out the advantages and pitfalls of working in areas as diverse as the building industry and the world of music.

A series which will find a welcome niche on many a school library shelf... attractively produced and clearly presented. (TES)

Working in a Hospital
Lesley Holland
£6.50 hardback/112pp/14 b/w illus/
0 7134 1839 7

Working as a Laboratory Technician
Anson Quinton
£6.50 hardback/112pp/12 b/w illus/
0 7134 4443 5

Working with Children
Margaret Cullum
£6.50 hardback/112pp/10 b/w illus/
0 7134 4463 0

HISTORY IN FOCUS SERIES

Favourite topics in British social history which are carefully presented for the 12-16 year old reader. Each book is illustrated with abundant and unacknowledged photographs, making them ideal for project and reference work, particularly for CSE.

Houses at Work
Christina Popescu
£6.50 hardback/72pp/66 b/w illus/
0 7134 4451 7

Village and Town Life
Sheila Ferguson
£6.50 hardback/72pp/68 b/w illus/
0 7134 4301 4

FINDING OUT ABOUT SERIES

An exciting series of history and geography books for 10-14 year olds. Each book provides a wealth of new source material for class and project work, practical advice on how to find such material and imaginative ideas about how to read and use it. 'Finding Out About' is a continuous delight. (TES)

Finding Out About Conservation
John Bentley and Bill Chertton
£4.95 hardback/48pp/30 b/w illus/
0 7134 4287 5

Finding Out About Seaside Holidays
Ian Bird and Stephen Humphries
£4.95 hardback/48pp/30 b/w illus/
0 7134 4439 8

Finding Out About Villages
John Bentley and Bill Chertton
£4.95 hardback/48pp/30 b/w illus/
0 7134 4291 3

COSTUME REFERENCE SERIES

This well-established series by Marion Sichel spans the development of British costume from Roman Britain to the present day, and includes details of hairstyles and accessories. The clear line drawings, glossary, bibliography and index make these books valuable reference works for schools.

A History of Children's Costume
£6.50 hardback/72pp/192 b/w & 4 colour illus/0 7134 1517 7

Batsford
4 Fitzhardinge Street
London W1H 0AH

Across the divide

Moving from the Primary Classroom. Edited by Maurice Galton and John Willocks. Routledge and Kegan Paul £6.95.

This book is the fourth in the series of research reports which together have made up the first five year stage of the Social Science Research Council funded ORACLE project. Taken as a whole, the work has provided an intriguing, stimulating and often controversial view of primary classroom practice.

Moving from the Primary Classroom takes the process of observation one step further by looking at the target groups after transfer to secondary school. There is already plenty of evidence that children are noticeably affected by transfer, some of them becoming increasingly anxious and a significant number suffering from impaired academic performance. One aim of this study was to look for reasons for this.

We have here an intriguing, complicated and very detailed study which repays close attention and which can only be summarized at risk of oversimplification. One important lesson to be learned, however, is that as pupils proceed through school they find that it narrows in upon them so that the possibilities for success and approval are presented to them along an increasingly limited front. This process is enhanced at transfer, whereupon there is a tendency for pupils to begin to polarize into hard workers and others - which process of polarization has been much studied further up the secondary stage by other observers. Illuminating accounts from classroom observation show, in this book, the roots of the polarization process.

One problem which the secondary school faces lies in trying to follow up and build upon the primary school's individualized approach. For example, the style of teaching in the secondary school may be to set a class to long sessions of working on paper in isolation, which activity itself - even though aimed at enabling each pupil to work at her own rate - may encourage the polarization already mentioned.

There are many points here for teachers to ponder upon. For one thing, it should be clear from the study that teachers, who are in my experience eager to co-operate across the secondary-primary divide, would do well to realize that teaching style may be a better focus for debate than simple curriculum content, which is what they usually talk about.

Gerald Haigh

Every Secret Thing. By Patricia Campbell Hearst.
Arrow £2.50. 0 09 930480 5.
A Death in California. By Joan Barthele.
Penguin £1.95. 0 14 006178 9.

On February 4 1974, around 9 pm, Patricia Hearst, daughter of the newspaper magnate William Randolph Hearst, was watching Mission: Impossible at home in Los Angeles with her fiancé Steve Weed. There was a ring at the door; when Weed answered, three members of the Symbionese Liberation Army burst in, knocking him to the ground. Patty was kidnapped. The rest, as they say, is history.

And fiction. Mythology of a particularly powerful sort. Patty Hearst was the poor little rich girl who, not content with tuning in, turning on and dropping out, became "Tanya", the machine-gun-toting revolutionary and bank-robber caught dramatically by security cameras weeks after the kidnapping. Cynics were

Older and wiser

Age is Opportunity: Education and Older People. By Eric Midwinter. Centre for Policy on Ageing £5.00.

Full fare passengers on British Rail each November would take some convincing that the hordes of pensioners usurping their seats were being deprived of a full life by an ingrateful society. Eric Midwinter, now the champion of the elderly and ever the master of the startling phrase which illuminates an argument, is conscious of the danger of over-dramatizing the bitterness of a generation which had little formal education, fought a war, and was then called upon to pay for the great educational expansion of the post war years - "one does not visualise gangs of marauding pensioners roaming the streets mugging defenceless teenagers". He is cautious, too, about being puritanical about older people who may prefer to "put their feet up and watch Mike Yarwood on the telly".

But there can be no doubt that the "massive Army of No Occupation" which is the retired offers opportunities for development on a scale hitherto not recognized by adult education's providers, for only ab-

out two per cent of people over sixty are involved in any kind of educational activity. Yet education could offer that kind of constructive activity, companionship, and mental stimulation which the elderly so often seek.

The appointment of Dr Midwinter, one of education's great purveyors, as Director of the Centre for Policy on Ageing, was a shrewd move, and in this slim volume he takes the argument into the offices of power, hoping to escalate the current discussions on preparation for retirement from the dimensions of a cosy bonfire into a public debate on the scale of a raging forest fire. If the book had done no more than describe succinctly the multifarious ways in which the elderly are participating in activities run by "an amazing spectrum of agencies", it would have been valuable, for no one hitherto has chanced so completely the potential of one of the few growth areas in education.

But Midwinter's message is much more significant. It is that the movement must be dominated by the concept of self-help and participation, using older people themselves as a resource, as does the new University of the Third Age, which is

described in some detail. Traditional organizations like the WEA may succeed if they can adapt their methods to the needs of Manchester College of Adult Education's 6000 students (are pensioners). But, the argument runs, what we now need is more financial support for specific schemes with tutors to promote them who are animators, bakers for custom and "brokers in the web of human learning". The elderly themselves need to be coaxed out of the idea that you can't teach old dogs new tricks and out of the belief that to be retired is to be "relegated to the fourth division of life". And in the process any suspicion that professionals seeking to fill vacant student places are bank-robbing must be destroyed.

Midwinter's book is the first penetrating shot in what will undoubtedly become a sustained barrage, for as he illustrates so well, the prize is great, the opportunities endless. Perhaps next November some of those trains will be filled with groups of pensioners on their way to remote parts to combine education with pleasure, new knowledge with new experience. And why not?

Frank Pedley

Undetected because unsought?

Women in Protest 1800-1850. By Malcolm I. Thomis and Jennifer Gimmitt.
Croom Helm £11.95. 0 7099 2407 0.
The Victorian Girl and the Feminine Ideal. By Deborah Gorman.
Croom Helm £11.95. 0 85664 913 9.

the cause and mock its supporters?

But if the historical significance of these findings is open to question, their dramatic interest is not. Court records show that, when fool was scarce, women felt justified in raiding stores, obstructing shipments, attacking traders, and forcibly fixing prices at rates they considered fair. In Nottingham in 1812, a redheaded loaf with black crepe was displayed as an emblem of "huddled famine decked in sackcloth." Looters of a mill outside Manchester were each charged with stealing "8 or 10 lbs of flour": the most that an apron could hold.

Threats to loquacious and limit-rights were doggedly defied. In Wales, enclosure officials confronted women who descended on them "like a millstone" and, during the Highland Clearances, the crofters stood by, their wives "literally milled among the bayonets".

Such reckless acts marked the spontaneous rallying, in daylight, of a desperate crowd. Where popular resistance was planned, clandestine and nocturnal, as in Lucie's sabotage, women played little or no part, although, ironically, it was not uncommon for male conspirators to

adopt a female disguise and collective persona: witness "Rebecca", sworn enemy of the toll-gate and the workhouse.

Women were prominent in the Northern societies for Parliamentary Reform and hence among those demonstrators injured at the massacre of Peterloo. Three who described the cavalry charge in print were subsequently convicted of libelling the King's soldiers. The sober aims of "the hen-Chartists" were castigated by *The Times* in 1842 as "destructive of the best feelings of humanity", despite their general conformity with the prevailing constraints of domestic duty.

This genteel code, the ideological corset with which ladies were lumbered, is painfully outlined by Deborah Gorman in *The Victorian Girl and the Feminine Ideal*: a sad reality relieved only by 14 short biographies of stalwart individuals and Marie Stopes who contrived to break free. Unfortunately for the author, much of her material has already been vigorously presented by Carol Dyhouse in *Girl Growing Up in the Victorian and Edwardian England* (published by Routledge last year).

Marion Glastonbury

Enfants terribles

quick to assume that the whole thing had been stage-managed. Whatever the pressures brought to bear on her - rape, sensory deprivation, terror - Patty Hearst, more than anyone in the seventies except perhaps the Rev. Jim Jones, became a scapegoat for all that had gone wrong with what Joan Didion called the "knocked down romanticism" of the sixties. In her novel *A Book of Common Prayer*, Didion transforms Patty "Tanya" into Marin Bogart, the child "lost to history".

In *Every Secret Thing*, Patty gives us her own version of that history. We are taken through the process that led from Patricia to "Tanya", a kind of enforced moral re-education. Lawyers (and one jury) were unconvinced that the horrors Patty described in court (and now in her book) were sufficient to explain the transformation. Patty was "lost to history" in that she underwent the most desired and feared of all American mythic processes, the abandonment of the past, self-creation: the spoiled daughter become a

revolutionary symbol. Patty's rich-kid attitudes did her no favours in court; neither did Hope Masters' when her turn came.

Same month, one year earlier, Hope had awakened suddenly in her family's ranchhouse outside Beverly Hills with a gun jammed in her mouth. In the next room, her lover lay dead in a huge pool of blood. The gunman roared and threatened her, told her that she had been put on a death contract by her ex-husband. All too familiar a scenario in seventies America.

What made Hope's case bizarre, like Patty's, was her apparent willingness, even desire, to protect her assailant. Undoubtedly confused, unsure who to trust, she accepted his hypnotic friendship: the "contract", of course, was a weird fiction. The man seemed to offer an escape from the meaningless Social Register tangle which had been her life. Like Patty, though, she was arrested and charged, this time with murder. In *A Death in California*, Joan Barthele ponderously details every

turn in a strange and complex case, tries to explain the strange fidelity between Hope and her attacker. As between Hope and her attacker, so with the Hearst trial, the jury and lawyers were antagonized - "live-in Hope's snobby pretensions - 'live-in maid', 'family ranch' - and by her maid". (America never did get rid of those).

Patty Hearst's *Every Secret Thing* belongs to a recognizable tradition, the self-justification or "apology". In *A Death in California*, we are never sure of our ground. The result is as confused and frightening as the ghastly case itself.

In the end, charges against Hope were dropped and her assailant convicted alone. Patty was pardoned and freed. America shows an endearing capacity for assimilating and absorbing even her most violent and terrible children. Forgiveness is the most insidious way of widening power and keeping the boat unrocked. Nixon guilty was a shock; Nixon pardoned, a worse one.

Brian Morton

BOOKS

In search of an ideal landscape

Neil Philip on the life of John Clare



Right to Song, though its rather overstates Clare's sense of destiny, and is too inclined to speculate about people's thoughts. *A Right to Song* is not the life of Clare: it stands beside, rather than replaces the *Tibbles' Life*, and no modern work can entirely supersede Frederick Martin's racy, unreliable *The Life of John Clare*, published only a year after Clare's death. Clare's own autobiographical writings, and his letters, also tell us much, and for crucial periods any biography is reduced to paraphrasing Clare's account.

It is good, though, to have a solid new biography, to accompany the present revival of interest in Clare's work, which has included the foundation of a John Clare Society which is making serious efforts to encourage Clare scholarship. The first year's *Journal*, edited by Storey, prints critical essays by two recent editors of Clare, Eric Robinson and R K R Thornton, and contributions from other enthusiasts. Especially interesting is Trevor Hold's "The Composer's Debt to Clare". Hold details Clare settings by composers such as William Sterndale Bennett, Peter Warlock, Ivor Gurney, Malcolm Arnold, Benjamin Britten, Michael Hurst, Richard Rodney Bennett and Iain Hamilton. He regrettably scotches Frederick Martin's claim that Clare had been seen by Rossini. The richness of Clare's response to Clare is paralleled by that of poets: one thinks immediately of Charles Causley's two marvellous poems, "At the Grave of John Clare" and "Helsinki".

Storey takes his epigraph from Causley, though not from these poems. It reads in part, "the real significance of an environment lies in its effect on the mind and imagination of the artist". Visitors to "Clare country", from John Taylor on, have been amazed that his flat, dreary landscape could have inspired Clare's lyrical intensity; what gives Storey's book its value is not any startling discovery or radical revaluation, but the extent to which he shares Clare's feeling for and intimate knowledge of that landscape, and can help us to gauge its "real significance".

Clare wrote almost exclusively of

the world of his daily experience. *John Clare's Birds*, edited by Eric Robinson and Richard Fitter, shows how carefully he observed that world. It can be enjoyed simply for the vividness, the cunning precision of its descriptions (the jay's eggs "of a pale greenish color thickly mottled with small brassy spots"; the yellowhammer's eggs "of a fleshy ash color streaked all over with black crooked lines as if done with a pen"), or used as a highly personal field guide. For Clare's work would stand, as ornithology, as botany, as a documentary social record, even were it not the great poetry it is: piercingly felt and vigorously expressed. It is a visionary's imagination re-created in Eden. Behind all the work - the seemingly "descriptive" nature pieces, the imitative poems of rural life, the haunting love lyrics - is a numbing, overlapping set of images which tie it all together and give it meaning beyond its accuracy, honesty and charm.

For Clare, each man's journey from childhood to adulthood relived the Fall. And in his case, nature itself made the same transition, as the wide, open landscape of his youth was enclosed. So nature became for him a potent, flexible metaphor for all that he felt deepest about the human condition. Nature and poetry were one; when Clare writes of a "rhythmic hinged" "rhyme", but not for "rhyme", the ambiguity, deliberate or not, points up the deepest connections of his thought. And poetry, nature and the freedom of childhood all come together in the figure of Mary Joyce, his ideal first love and muse, "my poetical fancy", whom in his

clearsighted madness he addressed as his wife. Clare's actual relations with Mary are unclear; we know more about her visits to his dreams than about their real life meetings. Storey is more sceptical about Mary Joyce than earlier biographers, seeing her as essentially a symbolic figure. He is also, rightly, kinder to Clare's real wife, Patty, whom earlier writers have tended to rebuke for not understanding Clare rather than admire for putting up with him. For Storey's Clare is no meek innocent, a "natural" poet too refined for this coarse world, but a stubborn, robust, independent man, with "a constant sexual hunger" and too much desperate strength to want, or need, our pity. It was, in the end, Clare's strength, not his weakness which broke him, wringing from the gentle, loving, compassionate poet the wild, flailing cry that, "man I never did like much & woman has long sickened me".

As a child, Clare "imagined that the world's end was at the horizon & that a days journey was able to find it". He kept up the search, against all odds, the search for an ideal landscape, till it drove him insane. He knew what had happened to him. He told Agnes Strickland in 1860, "they have cut off my head, and picked out all the letters of the alphabet - all the vowels and consonants - and brought them out through my ears; and then they want me to write poetry! I can't do it."

But he could; and in 1844 had still known what that meant: In every language upon earth On every shore, o'er every sea, I gave my name immortal birth, And kept my spirit with the free.

Eng lit opened up

English Literature in History 1730-80: An Equal, Wide Survey. By John Barrell.
Hutchinson £13.50.
English Literature in History 1780-1830: Pastoral and Politics. By Roger Sales.
Hutchinson. £13.50.

We talk of the historical background of literature, or perhaps of its context, but such talk often lacks both precise theorization and concrete instances. Raymond Williams is editing a new series to open up the question of "English Literature in History". Each volume will explore aspects of literature in historical periods of about fifty years, without aspiring to completeness of coverage or of explanation.

The two books under review do not offer much theoretical discussion, though they set aside both traditional and structuralist assumptions by placing the literary text firmly in a full and detailed history. For those who have been looking for a creative combination of contextual theory and English empiricism, this is only implicitly it. But we can see some of the problems and towards of the enterprise.

John Barrell's basic theme is of eighteenth-century social theory as attempts to construct concepts of political unity for a society increasingly recognized as diverse. Barrell shows how Thomson and Dryden present the gentleman as a specialist equipped to comprehend the structure and purposes of society, though he can do this only from a detached position which seems to prevent him from acting. Attention to the analogy, perceived and used as it was, reveals the political implications of theories of language as divinely instituted, as matters of custom or consent, as established by polite usage, as open to progressive change. The book concludes with a

shorter and less demanding chapter on Smollett.

Roger Sales takes up two main themes. He presents a pastoral as "propaganda of the victors" which effaces economic reality in the interests of the ruling class. Crabbe's position was that of the magistrate, Wordsworth's account of "poor old Michael's small estate disguised the sharp practices of real estate" (p. 69), and Clare's career and writing were a response to the injustices and suffering of rural life and the pressures of his upper-class sponsors. Sales' second concern is with politics as theatre: the connexion was often made, for instance over the Cato Street Conspiracy and the trial of Queen Caroline, and opposition to the government worked through a carnivalesque parody of official displays. Theatre affords a way into the political poetry of Shelley and Byron.

Barrell and Sales are both aware of the importance of language. Barrell shows how a polite norm came to dominate and how Roderick Random, though the better gentleman for his experience of diverse dialects, has to speak the language of the centre - the language of the narrator - to gain authority. In modern schools, similarly, progressive teachers may encourage pupils to write creatively in their own idiom, but they will need conventional skills to get such jobs as there are. So with the writer who would disclose new relations between history, literature and politics, John Barrell speaks the language of the centre: his work is thoughtful and scholarly, offering a careful dissection of complicity. His commitment is evidenced mainly by a steady assumption that literature and ideas do not transcend history and politics.

Roger Sales' approach is different. He wonders "whether the canons of the literary church may

not have conditioned us to see all radicalism as slang" (p. 103). His own writing will be accused of this, for the challenges the academic language of the centre with an aggressively political analysis and a relentless and irreverent play on modern catch-phrases (Jane Austen "erects wittily barbed fences to prevent familiarity from breeding a contempt for breeding" (p. 30); Tom Wolfe is twice credited with phrases). This vigorous manner, which is consonant with Sales' attention to cartoon and caricature as political modes, insists that old texts raise modern political questions and mocks the magisterial tone through which most academically respectable writing seeks to obscure its own political positioning.

Sales' radical slang risks rejection (thus the reader may need my reassurance that his book does contain significant historical research and reasonable analysis of texts); however, Barrell's language of the centre risks incorporation as another responsible piece of work. For the patient reader Barrell has the edge in theoretical sophistication: he discovers in his texts complex engagements with the contradictions in which they are enmeshed. Sales' more direct approach leaves him uneasy with apparent contradictions - for instance with Clare's similarity in some respects to Wordsworth and Cobbett, although this could be made productive through an analysis of the problems which beset subordinate and emergent discourses. But Sales' swinging approach can produce startling results. One may resist his criticism of "Michael" until the next chapter documents the human suffering involved in "the unacceptable face of rural society" and makes it difficult to reassert the cultivation of "literary values" for their "own sake". These are two stimulating books and they establish the need for the series.

Alan Sinfield



One of the Victorian's stranger artistic fads was their ecclesiastical medievalism: David Mearns' *Victorian Memorial Brasses* (Routledge and Kegan Paul £8.95) looks at one aspect of this. Above, the Waller Brass, 1850.

Next week

James Bentley discusses the problems involved in re-telling the Bible for children; Frances Hill examines the current threats to Radio 4's Identity; David Martin on Fernando Braudel and Martin Fagg on Norman Stone.

System acting

Stanislavski - An Introduction. By Jean Benedetti.
Methuen £2.95. 0 413 50030 6.

Hod Konstantin Stanislavski's view of acting being as simple as Noel Coward's - know the lines and don't trip over the furniture - he would now be almost forgotten. As it is, he is recognized as one of the most influential figures in twentieth-century drama. More than 40 years after his death, the "System" he devised remains, according to Jean Benedetti, the principle of the Rose Bruford College of Speech and Drama, of the root of all good acting, "a working method for the working actor".

Benedetti's *Stanislavski - An Introduction* is intended as a companion to the three volumes of Stanislavski's own writing noted around by all self-respecting drama students. It does not take the place of the Russian master's words, but judiciously amplifies and clarifies where necessary. Since Stanislavski couched his ideas in a forbidding vocabulary of perspectives, through-lines and super-objectives, this is no small service in itself.

In less than a hundred pages, Benedetti succeeds in depicting the essence at least of the System, accurately summarizing Stanislavski's main points about the actor's need first to be "inside" his character, thinking his thoughts as well as wearing his clothes, and second to integrate feeling and emotion with his "external" skills of voice and movement. More important, he shows the System to be a practical process and not just a drama school game. That is something for which many drama students, even perhaps a few actors, are going to be very grateful.

Hugh David

BOOKS

All that glisters

The World Rushed In: The California Gold Rush Experience. By J S Holliday. Victor Gollancz £12.50.

One hundred years after gold was discovered in California, J S Holliday began the daunting and time-consuming task of gathering together - using diaries, letters, published reminiscences and newspaper articles - the exact details of the gold rush experience.

The result is a book which revolves around the particular experience of a man named William Swain. Thirteen chapters chronicle his trip overland to California, his experience in the "diggings" and his return home by sea. Holliday prefaces each chapter with an historical overview, but the bulk of the book is taken up by the diary entries and letters faithfully written by Swain. Where necessary, his words have been supplemented by the observations of hundreds of others and each chapter closes with the letters sent to him from home.

The seven months' journey to California (the period covered in Swain's diary) comprises the first nine chapters. Here, in first hand, is a picture of what life was like for men with little or no knowledge of how to survive in the wilderness. Alienated from friends and families, exposed to variable weather conditions and almost continuous ill-health (many were the victims of cholera), overloaded with baggage

and dependent on the goodwill of strangers, the irresistible lure of gold was, nonetheless, almost religious in its intensity, sustaining these men when they were at their most disheartened.

Firm in the maintenance of what he believed to be his duty and supported by membership of a joint-stock company which adhered to basic principles of behaviour, Swain was faithful to his promise to record daily events for his own moral benefit and that of his family. For others, the gold fever was understandably the cause of enormous moral laxity. Subject to no laws nor societal strictures, many succumbed to various "evils". The three chapters recounting the period Swain spent prospecting for gold depict a society in which money was the only god worshipped, freedom and disappointment gave many an excuse for drinking and gambling, and what few women there were were apt to be prostitutes.

This book is a fascinating insight into the hearts and minds of Americans between 1849 and 1951. California was a fledgling territory which, through invention, luck and the accidents of fate developed into a state of wealth and power and changed the course of American history. The often poetic descriptions and the marvellous illustrations included give to this book an unexpected quality hitherto lacking in similar endeavours.

Brandon Russell

Testing time

Testing for Continuous Assessment (Evans £2.85 0 237 50516 9) is a systematic analysis of the methodology of testing. All kinds of test questions are considered, together with advice on setting, marking, and interpreting the test score. This involves discussing basic statistics, so the book is also a readable and relevant introduction for those of us who need it to means and medians, distribution curves and scattergrams, correlation coefficients and standard deviation. While not everyone will feel the need to become immersed in the topic to this extent, or to subject themselves to the self-assessment tests encountered at intervals in the text on what they have learned so far, they might none the less find it a useful aid to evaluation.

Review of Graded Tests (Methuen £2.95 0 423 51040 1) is a Schools' Council's Bulletin on Graded Objectives in Modern Language (GOML). The idea is to introduce for modern languages graduated tests to be taken at any age once the required standard of proficiency is reached, on the lines of instrumental or dancing grade examinations. The idea has been used successfully in mathematics testing in some areas for years, and the scheme has the advantage of providing less able children with more limited and attainable objectives that one test taken - if they get there - at the end of five years. This booklet gives information on the experience of various different GOML schemes to date, and an analysis of their distinctive features. Jessica Saraga

STUDY NOTES FOR TECHNICIANS

Lead the Student Step by Step to Examination Success...

A new British series which will help TEC students master all core material at levels 1, 2 and 3 for Electrical and Electronic Principles courses. Extensive worked problems, examples and exercises thoroughly explain theory helping your students to organize and prepare confidently for examinations.

Electrical and Electronic Principles

- 1 07 084681 8 72pp £3.26
June 1982 (level 1)
- 2 07 084682 6 141pp £3.26
June 1982 (level 2)
- 3 07 084683 4 148pp £3.26
January 1983 (level 3)

Forthcoming Titles
MICROELECTRONIC SYSTEMS LEVELS 1 & 2 R C Holland
MICROELECTRONIC SYSTEMS LEVEL 3 R C Holland

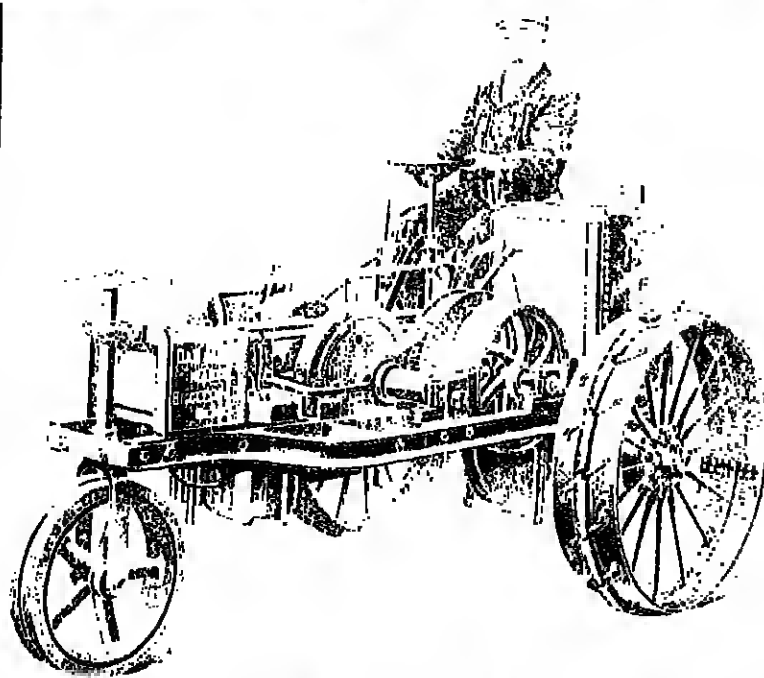
Inspection copies available from:
McGraw-Hill Book Co. (UK) Ltd.,
Shropshire Road, Maidenhead, Berks, SL6 2QL.

Book News
Children's Books

is a new book selection guide, for teachers and librarians, published in March and September. It offers: survey articles
• up to 200 short signed reviews of recent books for all ages
• interviews • forthcoming titles.

Only £5.00 p.a. (£6.50 overseas). Orders, with payment, to:
Sue Dommett, Basil Blackwell Publisher, 108 Cowley Road,
Oxford, OX4 1JF.

Published by The British Council



This engraving of Dan Albane's Ivel Agriculture Motor (tractor) is one of the illustrations to Doreen Yarwood's *Five Hundred Years of Technology in the Home* (Batsford £12.50), which is designed for O level students doing either social and economic history or home economics.

Hearsay and guesswork

Class, Culture and Community. A Biographical Study of Social Change in Mining. By Bill Williamson. Routledge and Kegan Paul £6.95. 0 7100 0991 7.

Popular Culture: Past and Present. Edited by Bernard Walter, Tony Bennett and Graham Marlow. Croom Helm/Open University Press £5.25. 0 7099 1909 3.

Population and Society in Britain, 1850-1980. Edited by Theo Barker & Michael Drake. Batsford £6.95. 0 7134 3676 X.

James Brown was born in a rural pit village in 1872. He died 93 years later two miles away in another village, Throckley, by the time a commuter suburb of Newcastle. In all his years he never strayed far from home, pit and family. Yet he lived through a revolution, economic, social and political.

So, I suspect, did your grandfather and mine. That is what makes their humble life-stories fascinating. We may not possess the skills and pertinacity to interpret their lives and analyse their revolutions, but Bill Williamson does. At the heart of his book is a vivid, affectionate family portrait. James Brown, like everyone else, refused to fit neatly into the sociologists' framework of classes and categories, and his obituary may have taught his grandchildren much about the pitfalls and possibilities of his discipline. James rarely put pen to paper. "Subtle injuries of class" is how Dr Williamson explains his "reticence and lack of interest in himself". So fading family memories, hearsay and guesswork have to be called in to reconstruct and explain attitudes and behaviour. That careful reconstruction illuminates many facets of a changing world: work, family and village community; club, chapel and co-op; industrial organization, entrepreneurial paternalism, trade union influence, political and social loyalties, moral and behavioural codes.

James Brown's father, with mobility typical of mid-Victorian labour, came from Norfolk to the booming coalfield. His son's life was narrower, lived wholly within what Dr Williamson calls the "constructed community" of the mining community. It was a crowded life, satisfying in its own way. Eight hours,

viewed cynically, archaeological at best, benefit their compilers more than they inform their readers. A volume as broadly based as *The Atlas of Archaeology* (edited by Keith Branigan, Macdonald £15.95) cannot be sufficiently detailed in describing cultural traits and illustrating the distribution of these cultures

3.30 to 11.30, of skilled, back-breaking labour; then, three allotments to cultivate, horse and flat cart for hire jobs, rabbits and pigs, hens, geese and ducks to tend, and a family to rear. His wife's domestic routine followed a similar relentless pattern. In the end, we are told, James looked back with some satisfaction on the "progress and improvement" that transformed his harsh, self-contained world, but also with some regret for the ordered, communal, crowded existence that was to be disrupted by economic and technological change, by class consciousness and politicization.

Set aside the microcosmic reality of James Brown's world, airy generalizations and wraith-like concepts might disappoint. But these two collections each take a clear theme as starting-point for broader exploration of social change. True, *Popular Culture*, according to the Open University Reader, covers an infinite range of interests and activities (though the pubs and clubs that dominated James Brown's leisure are ignored). Malcolmson, Thompson, Steadman Jones et al provide a solidly historical section, tracing popular recreation's collapse before middle-class morality and convergence in a host of new games. There follow some ponderously lively and moderately successful attempts to endow some of the lighter aspects of modern life with universal significance; and we explore enjoyably the submerged culture of children, motor-bike man, Jackie-reading teenagers, and the parts of James Bond that Fleming never reached.

Population and Society is more strait-laced and solidly statistical. Its demographic theme is close to the core of social change. Once past preliminary fussing over uncertainties and ambiguities in his figures, each contributor settles to his enquiry: quantitative assessment and explanation of changes in households, childhood, working women, health, mortality, employment, immigration. Each offers sensible discussion, and some (as Professor Hair on child labour) unexpected insight. The collection sets in its numerical and universal context one aspect of James Brown's revolution.

Tom Corfe

and their major sites. It aims at a globally even balance - though the Greek world is grossly over-represented and Australasia is not covered. However, with coverage of five cultures per continent or major region the geographical and chronological spread is sparse.

Ian Caruana

King's story

King Edward III. By Michael Packe. Edited by L. C. B. Seaman. Routledge & Kegan Paul £22.95. 71001 9024 2.

People often seem surprised to be told that the middle ages changed enormously in the course of a thousand years. No part of it changed more dramatically than the century between about 1300 and 1400. English was becoming standardized, poetry flourished, poorer people were getting less poor and more likely to be rebellious, the role of women was becoming more diverse and interesting. Yet you could hardly guess this from the illustrated manuscript books of romance and psalms which were being produced. The stiff, brightly coloured figures portray a timeless world of war and chivalry, decorous romance and occasional grim processions to the plague-pits.

Michael Packe (who unfortunately died before this, his last book, was quite finished) set out unashamedly to tell a king's-eye story. It is completely unjust to blame an author for not writing another kind of book. Mr Packe was a skilful professional writer and not a professional medievalist, but he has written his first full-scale account of Edward III (1327-77) since *Victorian Times*. Why should we complain if he pursues the intricate credit-operations of royal merchants or the secrets of Chancery procedures? Foisson would have been delighted, and so too those who like a good story. War and battles hold the stage. Detailed attention is given to the king's love-affairs. No horrific symptom of the pestilence is spared. There are clear and thorough treatments of difficult subjects too: the dispute over the dukedom of Brittany between Blois and De Montfort, for example, or the activities of great men as builders.

A few passages strike discordant notes, and even some of these are a matter of taste. I must admit to irritation at the fictionalization of details: "timber crashed down in the royal forests as he hurried on". Rather were the author's mistakes, especially when they are expressed with contempt. The "Ragnan Roll" does not derive from "rignarole" and is not "an over-rated parchment". The popes who lived at this time in Avignon are unjustly handled. Many were good, conscientious men. And if Benedict XII really was very fat it doesn't follow he was gluttonous. He was a Cistercian monk and the present reviewer has himself seen Cistercian monks who were fat because of carbonyl-hydrates rather than greed.

These are not intended as slight but warnings that the reader is going to get a clear, painstaking, old-fashioned story without much depth or subtlety but with a wide range.

Robin Du Boulay

Now Available in Paperback

WHAT'S WHAT IN THE 1980s

Edited by Christopher Pick

A dictionary of the modern world which explains new words and phrases and confronts the real issues underlying current developments in politics, the arts and sciences.

This book might make a useful adjunct to sixth form discussion groups as well as offering large (or hard-pressed) current affairs teachers a useful weapon.

The Times Educational Supplement
"This is one of the most fascinating books we have read in years."
World Affairs Report

March 1983 408 pages
EUROPA PUBLICATIONS
18 Bedford Square,
London WC1H 3JN

BOOKS

Children's literature
Naming demons

The Pink Fairy Book. Collected by Andrew Lang. Edited by Brian McNaughton. Illustrated by Collu Kestrel £7.50. 0 7236 5703 X.

Grimm's Fairy Tales. Translated by Peter Carter. Illustrated by Peter Richardson. Oxford University Press £7.95. 0 19 274529 8.

German Tales and Legends. By Ruth Rattelf. Illustrated by J E Brecheny. Frederick Muller £4.95. 0 584 62059 4.

Andrew Lang's coloured fairy books, eclectically compiled and erratically edited, have helped children name the demons of their imagination for nearly a hundred years. To continue to do so for another hundred they need exactly what Brian Alderson has provided: pruning of the few weak literary stories inserted in each volume; retelling to catch more truly the flavour of originals which as often as not were already translations before Lang's helpers got to them; and reshaping to transmit the sound of the voice not the scratch of the pen. All this could scarcely be done better than it has been here. If occasional phrases in Lang's text were more resonant (I prefer, for instance, Lang's "with all the pleasure in life" to Alderson's "Why ever

not?"), most of the changes are decided improvements. Lang's Andersen texts were Englished by Miss Alton Alleyne from German translations; Alderson has gone back to the Danish to provide something much more sprightly. Take the opening of "The Snow Queen": Miss Alleyne's sedate "How astonishingly cold it is! My body is cracking all over!" becomes Alderson's infectiously vivid, "I'm all of a crackle inside with this scrumptious cold!"

The *Pink Fairy Book*, besides several Andersen tales, among them his masterpiece "The Snow Queen" includes traditional stories from all over the world, demonstrating for Lang "that black, white, and yellow peoples are fond of just the same kinds of adventures". The best are the Danish and Swedish stories translated for Lang by W A Craigie: they are rich both in terror and laughter. Those from Japan, including the famous tale of Urashimataro who, like Oisín, returns from enchantment to discover his parents dead and his country changed beyond recognition, are not, perhaps, very convincingly Japanese; for want of a better solu-

tion, Alderson has left them as they were. But the African tales, which in Lang were stilted and odd, have been transformed by Jay Henle into impudent, hilarious, rude delights.

The illustrator of this edition, Ian McNaughton, takes his key from these comic fables rather than from the majesties of "The Snow Queen" or the horrors of "The Princess in the Coffin", though he provides for this latter story an appropriately menacing headpiece. His comic vignettes give the book a warm, inviting air: a far cry from the atrocious and richly sensual pictures drawn by H J Ford for the 1897 edition. The few drawings in which McNaughton makes use of his predecessor's work serve only to sharpen the contrast, which is essentially one between decoration and illustration.

But McNaughton's pictures, if they cannot match Ford's in range or intensity, have a pungent wit of these new texts, leading us to the cottage, not the study. Peter Richardson's illustrations in black and white and colour for Peter Carter's new translation of 30 of Grimm's *Fairy Tales* take us into

Disneyland. Hansel and Gretel become wide-eyed little waifs; the brave little tailor looks like Pinocchio; Snow White and Rose Red are as sweet as sugar candy. This is, I suppose, one way of illustrating Grimm: its limitations are made apparent by a quick glance at Maurice Sendak's spine-tingling pictures in Segal's *The Juniper Tree*. Richardson's efforts do, however, prepare us for Carter's loose, unsatisfactory translations. By novelist's expansion, often of a whimsical nature, Carter manages to blur completely the clear lines of the tales, deadening and muffling their impact. Take "Rumpelstiltskin", surely one of the most threatening and disconcerting of all stories. At a key moment, Rumpelstiltskin comes to collect the child which was promised him. The mother begs him to take anything but the baby, but he replies (in, for instance, Alderson's translation), "No, a living thing is dearer to me than all the treasures of the world!" This highly ambiguous and menacing statement becomes in Carter, "No, I want the baby. You must keep your promise." This is because, "I am lonely,

too and no woman will ever marry me so that I shall never have a child of my own unless I take this." At the end we are reminded that "still, you know, it was sad for the dwarf who wanted to have a child of his own to love and care for." Carter's sentimentalized translations have neither the familiarity of Taylor's, the alertness of Alderson's, the crispness of Segal's nor the solidity of Mannheim's: children encountering Grimm in this version will be playing with toy grenades, not live explosives.

Ruth Rattelf, who retells her *German Tales and Legends* from childhood memories of her storytelling nurse, is the author as Ruth Michaelis-Jena of an authoritative biography of the brothers Grimm, and herself a translator of Grimm tales. The stories in this little book are gentle, safe fairy legends, sometimes charming, sometimes coy, never threatening. She has remembered them all her life; other children may do the same, though more likely if they are reworked in the tones of a familiar voice than if they are encountered just as printed.

Neil Philip

SMP 11-16

Levels 1 and 2 OUT NOW

After successful trials in a wide variety of schools, publication of the new SMP 11-16 course has now started.

Levels 1 and 2 of the new material are available now. Level 3 is due out in the Autumn and level 4 in the early part of 1984.

Levels 1 to 4 cover the first two years of a five-year secondary programme; the material for years 3, 4 and 5 will follow in due course.

Please write to Home Sales Dept., Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU for

- an illustrated brochure describing the course
- an inspection pack for Levels 1 and 2 (includes booklet giving advice on setting up the course).

Cambridge Educational

Andrew Worrall

Grammatical etiquette

English Grammar for Today. By Geoffrey Leech, Margaret Dench and Robert Hoogenraad. Macmillan £12.00. 0 333 30643 £3.95 30644 9.

Few English teachers today feel entirely comfortable when teaching grammar. The recognition has grown that a prescriptive Latin grammar does not describe living English; that its rules can only be relied upon to apply to artificial structures designed to prove them. Yet if there are no reliable terms in which to describe varieties of linguistic usage we find ourselves unable to say why one form may be more appropriate, expressive or clearer than another. Teachers and students of English need a framework of grammatical concepts which describe our language, spoken and written, as it is now and from which appropriate rules of usage may be derived.

This book is a convincing attempt to do just this. Published in conjunction with the English Association, it is designed as a course book for the sixth form and tertiary level with exercises following each chapter, but teachers will also find it enlightening. In the introduction, the idea of good and bad grammar is replaced by a notion of "grammatical etiquette" and the importance of recognizing variations in language according to user and use.

The second part, and two thirds of the book, is concerned with analysis. Fundamental is the idea that "Grammar is not a precise logical or mathematical system but has much in common with biological systems, in that it involves overlapping criteria and has fuzzy edges." This means that there is not always a single, uniquely correct parsing of a sentence. Much of the subsequent terminology is familiar but the authors show how it can be used to describe literary or spoken language which previously had seemed too outside the rules.

The third part of the book indicates ways in which an understanding of grammar can inform a study of style, improve composition and suggest rules of usage. So we are brought full circle but with a new awareness of how grammar may be not a shackle but a useful tool.

RESOURCES

After the alphabet

Susan Thomas discusses a BED in computer studies

Not since the alphabet has an educational innovation made so much impact on the teaching profession. Syllabuses have been rewritten, fund-raising objectives changed, and innumerable attempts made to convert unlikely people into computer specialists overnight. And all the while, beleaguered staff are being outstripped by the whizz kid computer buffs.

The DES promised, and the I.C.A.'s agreed, to put a micro into every school where there are staff competent to handle it. As a result, the body educational has broken out in a rash of crash computer courses. Earlier this term I went along to Christ Church College, Canterbury to see something with a little more depth to it.

This latest Kentish option, a BED in computer studies, is the product of two earlier initiatives. Dr Graham Brown, head of teacher education at the college, explained that it grew out of the part-time BED for serving teachers (which was introduced in September 1980) and the Cert Ed in computer studies (which began in September 1981). Last year, he says, the obvious need for more substantial computing education persuaded the college to offer a maximum of four computing units at BED level. So far, 19 students have taken up the option.

The syllabus, like the student selection, was designed jointly by the college and the county's maths inspectors. It takes in the principles of program design with particular reference to data structure, an early introduction to procedures, and a comparison of Basic and Pascal. It also covers the basic hardware involved in the system and the necessary software; makes a detailed study of systems analysis and design; looks at applications including data processing for schools; and finally, considers the place of the computer

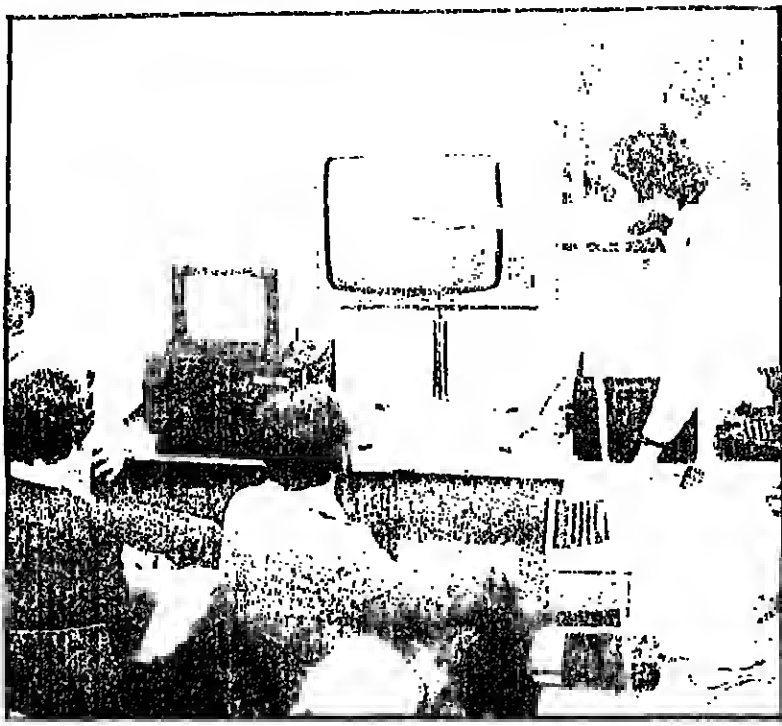
course in the curriculum and the role of the computer in education. To cope with all this, says Dr Brown, "we selected experienced teachers" (at least three years at the chalkface) "who were keen to see computers used throughout the school - not just for computer studies - and ideally, who have had previous experience of computing. And it is essential that they be able to get their hands on a micro during the week".

Dr Bill Flinn, who is in charge of the course, says it doesn't quite work out like that. Most students have some previous experience, ranging from systems analysis in industry through last year's Cert Ed course to a few sessions with a fellow teacher. A couple find no experience whatever, and nearly all find it incredibly difficult to get enough computer time at school. But despite the problems there has only been one drop-out so far.

There were three times as many applicants as places, but no aptitude tests for candidates. This omission interested the teachers, who are constantly faced with trying to select "computing ability" at the 13-plus option stage.

The Christ Church course runs for three years and has two three-hour sessions a week, which run concurrently. The full time BED has 12 units, explained Dr Brown. "We assume their previous qualifications are equivalent to five units. They do programming principles and applications, and curriculum studies in the first year, concepts of computer systems and communication in the classroom in the second, and information systems and computer application, computers in education and an education report in the third."

Of the 19 students on this first year of the course, 17 are secondary teachers, 15 are men and 8 are already teaching computer studies.



Dr Bill Flinn, mathematics lecturer, with BED computer studies pupils.

The rest expect to do so by the time the course is completed.

Sue Wilkie teaches maths and computer studies at the Holy Cross School in Broadstairs. She took the Cert Ed computing course at Canterbury last year and found it a valuable introduction. Her school has one 380Z, and two 480Zs. It recently got a county grant to upgrade the system to twin disc 56K storage, extending computer studies to the third year.

Sue enjoys the course. So far it is the education side which poses problems. "I feel as if I'm achieving something, and it's given me the opportunity to get my piece of paper" at last.

"The kids take an interest too. It improves relations when they see that you need to study to improve your qualifications."

Fred Hinkley, ex-systems analyst, teaches at Barnsole Junior School in Gillingham. He runs computing courses for staff on Acorn Atoms,

380Z and BBC machines. He also writes programmes for use in maths and English lessons, runs a computer club, and anticipates bringing in parents as helpers.

Brought up on machine code and now teaching in Basic he finds it hard to see the relevance of the Pascal used on the course. "On the other hand," he said "this course is the only one which relates education to computing."

He feels it would have been better if the government had educated teachers in computing before putting the machines into the schools. As for their insistence on the BBC and 380Z machines: "For the same price we could have had half a dozen Spectrums and that much more hands-on time. The 'robust machines' argument really doesn't hold water either, because the whole lot will have been superseded in five years time."

John Bailey is head of computer studies at Sheppey School, a 12-18 co-ed comprehensive. The course offers him the chance to combine a degree with a qualification in computer studies. He questioned the relevance of the course so far to the needs of industry in general and his school leaves in particular.

But, according to the syllabus - all will be revealed in time. Problems are inevitable on a new course, especially when the initial catchment and final application is so broad. To his credit, Bill Flinn is only somewhat daunted, and expects to teach most things, from computer science to CAL in learning theory, to most people, in the course of the three years.

It is essential too that the most questions posed by computer technology should be considered by teachers and their classes - the accessing of personal information and the creation of "leisure" classes. Computer naturally, the problem of "dirty data" and the limitations of the Data Protection Act, won't appear till the third year, however.

On the available evidence, he says, Pascal is clearly the best language to train in and computing Basic follows more naturally later on. "And because people have come with a variety of languages, it is as an equalizer."

The sessions are very concentrated, especially when they follow morning's teaching. The group appeared to have little free time to swap ideas in an informal way.

Much more troubling, however, is the lack of support from schools. More than half the group have no cover for their time out - instead, their free periods are lumped together providing a "free" afternoon. This seems hardly an incentive to a person struggling with a difficult course, no matter how beneficial it will ultimately be to the school community.

In the end, teacher realism or resignation prevails. "There is no doubt," said one student, "but we would all be better off if this had been planned as a one year, full-time course. Equally there is no doubt that I would never have got on it, if it had been."

A children's newspaper, the riveting quarterly later known as Zoni Life was launched as *Animal and Zoo Magazine* by Julian Huxley. A cross between *Zoo Quest* and *Hut-spur* it ran till 1957 and nurtured a whole generation of zoologists. Then in 1958 Sir Solly Zuckerman succeeded Prince Philip as president of the society and initiated an education department proper with its own education officer.

At first, in keeping with the society's academic priorities, the lecture and demonstration programme was geared to the needs of the grammar schools. In 1959 came the XYZ Club (Exceptional Young Zoologists) - its title a "fifties joke now worn thin at the zoo. The £2.50 annual membership fee brings its 9-18-year-old members a quarterly *Zoo Magazine*, free holiday activities at London or Whipsnade and, best of all, free tickets to the zoo to be used by the member or another child of the same age.

Membership of the XYZ Club grew rapidly to around the 3,000 mark and 1960 brought Michael Boorer as the new education officer with a brief to extend zoo education to all sorts of secondaries and to organize the young zoologists.

The 1960s brought much more - schools, housing estates and education went on open plan. The cages lost their bars and mounds were used to separate public and animals. The primaries, urged on by Powden, looked for an experience of education and the secondaries went environmental.

The zoo's education department responded with special programmes for primaries and secondaries, both the more and less academic, and in 1970 signed the first of its sixth form symposia. Such was the fascination of *The Natural History of Man* that 1,000 applications were received for the 250 available seats.

The biggest change, says Michael Boorer, has not been the rise in numbers (15,760 in 1958, 66,558 in 1982) or the inclusion of the primary classes but the philosophy of the syllabus. "Zoology nowadays is actually concerned with animals! My A levels were entirely devoted to the skeletons, reproductive systems and alimentary tracts of worms and dogfish."

"Now most exam syllabuses have at least an element of Nuffield. You may not actually find many giraffes on the A level courses but they are concerned with animals' classification, behaviour and adaptation."

"Our intention is to increase children's knowledge of the animal kingdom, to kindle their interest and shape their attitudes. Above all we try to encourage an understanding and respect for animals in their own right - and to see ourselves not as superior beings but other animals - equal but different."

As well as the twice yearly sixth form symposia, A level students are offered a choice of six 45 minute lectures and guided tours. A further six programmes for 14-16 year-olds have been designed to fit CSE and O level courses and there is a choice of lecture documentaries for 11-13 year-olds. Older juniors, handicapped pupils and less academically able secondaries are offered general interest talks and tours: Big, Small, Useful or Nasty Animals.

The massive increase in provision was made possible by the building of the specialist Zoo Centre in 1975. Adjoining the ILEA Teacher's Centre for Life Studies it allows the two

RESOURCES

Respect for animals

Zoo education is 25 years old this year. Ann Stuart examines changes in attitudes and methods

Zoo education is 25 years old this year, according to the Zoological Society of London. Surely not! Zoo education began 1826 when Stamford Raffles and Humphrey Davy decided to import "new and curious animals" and "propagate strange reptiles all over the kingdom." The news got a mixed reception. "We do not know how the inhabitants of the Regent's Park will like lions, leopards and lynxes so near their neighbourhood," remarked the *Literary Gazette*.

Not that the man in the street had much chance to see the collection in the early days. Although the public was allowed into the menagerie from the first with the sponsorship of a Fellow, it was not until the 1840s that the turnstiles admitted all those who could muster a shilling.

By the end of the century, however, Londoners had taken the zoo to their hearts. Earnest Victorians attended the public lectures and took their children to see the animals and by the 1920s twenties, thanks to a certain Mr Milne, every nicely brought up infant knew that the zoo contained "Badgers and badgers and bidders and a Super-intendent's house... masses of goats and a Polar and a certain kind of mouse."

Unfortunately "Now we are Six" did little to further our understanding of animal characteristics and behaviour.

"Anthropomorphism had bedevilled our attitudes to the animals" says Michael Boorer, the zoo's education officer. "The greatest villain of the twentieth century was Walt Disney and before him, Aesop."

The ZSL did its best, however, disseminating an amazing bulk of learned papers from its libraries and laboratories. "Probably the best work ever written on the anatomy of the Indian rhino was produced in London 140 years ago."

A children's newspaper, the riveting quarterly later known as Zoni Life was launched as *Animal and Zoo Magazine* by Julian Huxley. A cross between *Zoo Quest* and *Hut-spur* it ran till 1957 and nurtured a whole generation of zoologists. Then in 1958 Sir Solly Zuckerman succeeded Prince Philip as president of the society and initiated an education department proper with its own education officer.

At first, in keeping with the society's academic priorities, the lecture and demonstration programme was geared to the needs of the grammar schools. In 1959 came the XYZ Club (Exceptional Young Zoologists) - its title a "fifties joke now worn thin at the zoo. The £2.50 annual membership fee brings its 9-18-year-old members a quarterly *Zoo Magazine*, free holiday activities at London or Whipsnade and, best of all, free tickets to the zoo to be used by the member or another child of the same age.

Membership of the XYZ Club grew rapidly to around the 3,000 mark and 1960 brought Michael Boorer as the new education officer with a brief to extend zoo education to all sorts of secondaries and to organize the young zoologists.

The 1960s brought much more - schools, housing estates and education went on open plan. The cages lost their bars and mounds were used to separate public and animals. The primaries, urged on by Powden, looked for an experience of education and the secondaries went environmental.

The zoo's education department responded with special programmes for primaries and secondaries, both the more and less academic, and in 1970 signed the first of its sixth form symposia. Such was the fascination of *The Natural History of Man* that 1,000 applications were received for the 250 available seats.

The biggest change, says Michael Boorer, has not been the rise in numbers (15,760 in 1958, 66,558 in 1982) or the inclusion of the primary classes but the philosophy of the syllabus. "Zoology nowadays is actually concerned with animals! My A levels were entirely devoted to the skeletons, reproductive systems and alimentary tracts of worms and dogfish."

"Now most exam syllabuses have at least an element of Nuffield. You may not actually find many giraffes on the A level courses but they are concerned with animals' classification, behaviour and adaptation."

"Our intention is to increase children's knowledge of the animal kingdom, to kindle their interest and shape their attitudes. Above all we try to encourage an understanding and respect for animals in their own right - and to see ourselves not as superior beings but other animals - equal but different."

As well as the twice yearly sixth form symposia, A level students are offered a choice of six 45 minute lectures and guided tours. A further six programmes for 14-16 year-olds have been designed to fit CSE and O level courses and there is a choice of lecture documentaries for 11-13 year-olds. Older juniors, handicapped pupils and less academically able secondaries are offered general interest talks and tours: Big, Small, Useful or Nasty Animals.

The massive increase in provision was made possible by the building of the specialist Zoo Centre in 1975. Adjoining the ILEA Teacher's Centre for Life Studies it allows the two

ly's academic priorities, the lecture and demonstration programme was geared to the needs of the grammar schools. In 1959 came the XYZ Club (Exceptional Young Zoologists) - its title a "fifties joke now worn thin at the zoo. The £2.50 annual membership fee brings its 9-18-year-old members a quarterly *Zoo Magazine*, free holiday activities at London or Whipsnade and, best of all, free tickets to the zoo to be used by the member or another child of the same age.

Membership of the XYZ Club grew rapidly to around the 3,000 mark and 1960 brought Michael Boorer as the new education officer with a brief to extend zoo education to all sorts of secondaries and to organize the young zoologists.

The 1960s brought much more - schools, housing estates and education went on open plan. The cages lost their bars and mounds were used to separate public and animals. The primaries, urged on by Powden, looked for an experience of education and the secondaries went environmental.

The zoo's education department responded with special programmes for primaries and secondaries, both the more and less academic, and in 1970 signed the first of its sixth form symposia. Such was the fascination of *The Natural History of Man* that 1,000 applications were received for the 250 available seats.

The biggest change, says Michael Boorer, has not been the rise in numbers (15,760 in 1958, 66,558 in 1982) or the inclusion of the primary classes but the philosophy of the syllabus. "Zoology nowadays is actually concerned with animals! My A levels were entirely devoted to the skeletons, reproductive systems and alimentary tracts of worms and dogfish."

"Now most exam syllabuses have at least an element of Nuffield. You may not actually find many giraffes on the A level courses but they are concerned with animals' classification, behaviour and adaptation."

"Our intention is to increase children's knowledge of the animal kingdom, to kindle their interest and shape their attitudes. Above all we try to encourage an understanding and respect for animals in their own right - and to see ourselves not as superior beings but other animals - equal but different."

As well as the twice yearly sixth form symposia, A level students are offered a choice of six 45 minute lectures and guided tours. A further six programmes for 14-16 year-olds have been designed to fit CSE and O level courses and there is a choice of lecture documentaries for 11-13 year-olds. Older juniors, handicapped pupils and less academically able secondaries are offered general interest talks and tours: Big, Small, Useful or Nasty Animals.

The massive increase in provision was made possible by the building of the specialist Zoo Centre in 1975. Adjoining the ILEA Teacher's Centre for Life Studies it allows the two

ly's academic priorities, the lecture and demonstration programme was geared to the needs of the grammar schools. In 1959 came the XYZ Club (Exceptional Young Zoologists) - its title a "fifties joke now worn thin at the zoo. The £2.50 annual membership fee brings its 9-18-year-old members a quarterly *Zoo Magazine*, free holiday activities at London or Whipsnade and, best of all, free tickets to the zoo to be used by the member or another child of the same age.

Membership of the XYZ Club grew rapidly to around the 3,000 mark and 1960 brought Michael Boorer as the new education officer with a brief to extend zoo education to all sorts of secondaries and to organize the young zoologists.

The 1960s brought much more - schools, housing estates and education went on open plan. The cages lost their bars and mounds were used to separate public and animals. The primaries, urged on by Powden, looked for an experience of education and the secondaries went environmental.

The zoo's education department responded with special programmes for primaries and secondaries, both the more and less academic, and in 1970 signed the first of its sixth form symposia. Such was the fascination of *The Natural History of Man* that 1,000 applications were received for the 250 available seats.

The biggest change, says Michael Boorer, has not been the rise in numbers (15,760 in 1958, 66,558 in 1982) or the inclusion of the primary classes but the philosophy of the syllabus. "Zoology nowadays is actually concerned with animals! My A levels were entirely devoted to the skeletons, reproductive systems and alimentary tracts of worms and dogfish."

"Now most exam syllabuses have at least an element of Nuffield. You may not actually find many giraffes on the A level courses but they are concerned with animals' classification, behaviour and adaptation."

"Our intention is to increase children's knowledge of the animal kingdom, to kindle their interest and shape their attitudes. Above all we try to encourage an understanding and respect for animals in their own right - and to see ourselves not as superior beings but other animals - equal but different."

As well as the twice yearly sixth form symposia, A level students are offered a choice of six 45 minute lectures and guided tours. A further six programmes for 14-16 year-olds have been designed to fit CSE and O level courses and there is a choice of lecture documentaries for 11-13 year-olds. Older juniors, handicapped pupils and less academically able secondaries are offered general interest talks and tours: Big, Small, Useful or Nasty Animals.

The massive increase in provision was made possible by the building of the specialist Zoo Centre in 1975. Adjoining the ILEA Teacher's Centre for Life Studies it allows the two

ly's academic priorities, the lecture and demonstration programme was geared to the needs of the grammar schools. In 1959 came the XYZ Club (Exceptional Young Zoologists) - its title a "fifties joke now worn thin at the zoo. The £2.50 annual membership fee brings its 9-18-year-old members a quarterly *Zoo Magazine*, free holiday activities at London or Whipsnade and, best of all, free tickets to the zoo to be used by the member or another child of the same age.

Membership of the XYZ Club grew rapidly to around the 3,000 mark and 1960 brought Michael Boorer as the new education officer with a brief to extend zoo education to all sorts of secondaries and to organize the young zoologists.

The 1960s brought much more - schools, housing estates and education went on open plan. The cages lost their bars and mounds were used to separate public and animals. The primaries, urged on by Powden, looked for an experience of education and the secondaries went environmental.

The zoo's education department responded with special programmes for primaries and secondaries, both the more and less academic, and in 1970 signed the first of its sixth form symposia. Such was the fascination of *The Natural History of Man* that 1,000 applications were received for the 250 available seats.

The biggest change, says Michael Boorer, has not been the rise in numbers (15,760 in 1958, 66,558 in 1982) or the inclusion of the primary classes but the philosophy of the syllabus. "Zoology nowadays is actually concerned with animals! My A levels were entirely devoted to the skeletons, reproductive systems and alimentary tracts of worms and dogfish."

"Now most exam syllabuses have at least an element of Nuffield. You may not actually find many giraffes on the A level courses but they are concerned with animals' classification, behaviour and adaptation."

"Our intention is to increase children's knowledge of the animal kingdom, to kindle their interest and shape their attitudes. Above all we try to encourage an understanding and respect for animals in their own right - and to see ourselves not as superior beings but other animals - equal but different."

As well as the twice yearly sixth form symposia, A level students are offered a choice of six 45 minute lectures and guided tours. A further six programmes for 14-16 year-olds have been designed to fit CSE and O level courses and there is a choice of lecture documentaries for 11-13 year-olds. Older juniors, handicapped pupils and less academically able secondaries are offered general interest talks and tours: Big, Small, Useful or Nasty Animals.

The massive increase in provision was made possible by the building of the specialist Zoo Centre in 1975. Adjoining the ILEA Teacher's Centre for Life Studies it allows the two

ly's academic priorities, the lecture and demonstration programme was geared to the needs of the grammar schools. In 1959 came the XYZ Club (Exceptional Young Zoologists) - its title a "fifties joke now worn thin at the zoo. The £2.50 annual membership fee brings its 9-18-year-old members a quarterly *Zoo Magazine*, free holiday activities at London or Whipsnade and, best of all, free tickets to the zoo to be used by the member or another child of the same age.

Membership of the XYZ Club grew rapidly to around the 3,000 mark and 1960 brought Michael Boorer as the new education officer with a brief to extend zoo education to all sorts of secondaries and to organize the young zoologists.

The 1960s brought much more - schools, housing estates and education went on open plan. The cages lost their bars and mounds were used to separate public and animals. The primaries, urged on by Powden, looked for an experience of education and the secondaries went environmental.

The zoo's education department responded with special programmes for primaries and secondaries, both the more and less academic, and in 1970 signed the first of its sixth form symposia. Such was the fascination of *The Natural History of Man* that 1,000 applications were received for the 250 available seats.

The biggest change, says Michael Boorer, has not been the rise in numbers (15,760 in 1958, 66,558 in 1982) or the inclusion of the primary classes but the philosophy of the syllabus. "Zoology nowadays is actually concerned with animals! My A levels were entirely devoted to the skeletons, reproductive systems and alimentary tracts of worms and dogfish."



Hippos at Whipsnade.

staffs to work together.

Zoo staff have been supplemented by ILEA who seconded a secondary school teacher to the London Zoo in 1981. Bedfordshire followed suit the next year with a Whipsnade teacher and ILEA, mindful of the neglected primaries, offered a junior deputy head to Regents Park.

Recruited from the personal columns of *The Times* and *The Guardian*, the volunteers, some with teaching experience, some with zoological knowledge and some with no confidence, escort the younger pupils, supervise the animal handling (proceeds divided between the ZSL and the World Wildlife Fund) and, this summer, will push "Feels on Wheels" trolleys.

"Perhaps a reptile trolley with sloughed snake skins, venom-fangs, a rattlesnake's rattle," says Michael Boorer, "we want to give people a more direct experience of the zoo."

It may not have the customer appeal of the old "Chimpanzee's Tea Party", but antitropism is definitely out these days.

The education department is also responsible for informative interpretive material. The problem, as Dr Bertman, curator of small mammals explained, is the vast amount and variety of information available. How can you tell people the name, age, sex and marital status of an animal, what it likes for dinner, does in its spare time and, given the opportunity, where it would be if not in the zoo, if the only space available is a formal plastic rectangle the size of an exercise book?

He has some interesting ideas. There is "Spot the Kudu" - learn to tell Emma from Ethel by the pattern of her stripes. Combine this with Michael Boorer's "thin silver off the front of a London bus placed just inside the giraffe house - they both happen to be the same height" and Felcy Wheelies and zoo education takes on a new light.

On the informal fun and greet their surprised parents in excited French. Her week-end, weekly or monthly courses for adults can be residential; she can also pack up her lab and travel anywhere in Britain. She likes to take only 8-10 people a session. The children come from a 50-mile radius on Saturday mornings and stay as long as they want, paying £1 an hour.

For further information write: Maggy Stead, European Language Lab, The Steadings, Nether Blaisie, Galashiels, Selkirkshire TD1 2PR.

Peta Levi

Language teacher Maggy Stead, who notwithstanding her name comes from Luxembourg, was so appalled by the inhibitions of British children around the age of 12 in speaking French that she has started a peripatetic language lab based in Scotland where she teaches 25 12-14-year-olds on Saturday mornings.

Maggy, who has a degree in modern languages from Strasbourg University, taught for three years in further education, then for two years in a Glasgow comprehensive school and subsequently two years in a language laboratory; she teaches French, German and Italian and English to foreign students.

She opened in June 1981 after taking a 24-year lease on the (disused) local gaol at Lauder, 25 miles south of Edinburgh, which her husband, furniture designer Tim Stead, has converted into a language lab with individual working carrels.

Maggy says: "I felt that if I taught children from the age of 12 they would learn a foreign language as easily as their mother-tongue."

Her approach is to teach through play, whether in the form of games such as picture ludo, monopoly or bingo, or colouring or singing songs or tape-recording their acting or disc jockeys or their telephone conversa-

tions on an intercom system. She initially installed the intercom to help business people to become fluent on the telephone as she originally thought that the wide-ranging business courses she runs would subsidize the children's sessions. In fact the children's courses have become so popular that they finance the laboratory. She has two children, aged two and four, so knows how quickly they can learn through play and how well they copy accents at that age. She says that even shy children who are known not to talk much at playgroup seem to thrive

Make the most of FILM and VIDEO

Choose from a wide range of subjects such as: retirement, bereavement, childbirth, stress, divorce, drug rehabilitation and violence. Ideal as material for study and discussion groups, these programmes are available for hire or purchase on 16mm film or video cassette. CTVC religious productions are available on free loan.

For more information, please contact: CTVC, Film Library, Dept. TE, Foundation House, Walton Road, Bushey, Watford WD2 2JF (Tel: Watford 35444)



Museum pieces

by James Bromwich

Highlights of the Victoria & Albert Museum
Highlights of the British Museum
Slide-tape programmes prepared and presented by Nancy Armstrong
Sussex Tapes, Devizes, Wilt. £35 each

It is surprising to see Sussex Tapes, who have normally concentrated on well designed material for use in upper secondary, further and higher education spheres, aim so specifically at the education for leisure market.

The tone is clearly defined by Nancy Armstrong's opening words: "I'm your speaker today" accompanied by a slide photograph of her. A relaxing and human touch to introduce the presenter (and producer) of the tape. It initiates an approach that is never demanding, avoids concentrating very long on any one thing, and gives the pieces a context but rarely any analysis.

Probably the V&A set is the better of the two. The museum is more eclectic than most, and her selection is as valid as any. Though she claims "a social history point of view", a few history teachers would see her approach in this light: it is really a chronological rather than department presentation of the museum, and the evidence for "the development of style" - whatever that may mean - is little more than the truism that taste has changed over time.

The set is also weighted to the eighteenth century, which means some aspects of the museum's collection are rather starkly represented. An isolated Chinese jade and a single Maybridge photograph at least indicate the vast range of the museum. The history of the museum is done well.

It is an approach which could go down well with a group of adults interested either in collecting antiques in a minor way or in visiting a cultural storehouse and wanting some idea of what they might see.

The set on the British Museum follows the same formula. Again it has been tackled in a studiously non-academic way. The Sutton Hoo ship burial has been "dealt with by erudite scholars" who are nameless, and very little of what they dealt with is mentioned.

The Snettisham torc is discussed as being "of great monetary value". The Lyte Jewel is handled well; three slides and interesting elements are pointed out that make one look at each one carefully, yet even this exceptional treatment is marred by the deliberately anti or non-intellectual outlook: it has, you see, been "discussed by learned men".

The tone of chatty wonder - "what a period it was for uncomplicated love of pure ostentation" - might still be enough for the notional group of inept adults, but most educationists will want more for their students.

There are no teacher's notes to make it possible to point out aspects of the museum pieces that reveal elements of the societies that produced them, whether in terms of technique, artistic taste or social mores.

The slides are appealingly packed in stiff plastic envelopes that are easy to tear, and time will be needed to set the lecture up. For mainstream education the limitations can easily be overcome: far better for the teacher to go to the museum (or send for a list of current slides) and order the relevant examples for work on, say, the Egyptians, Greeks or the works of Turner.

Active holidays

Over 500 centres, including hotels, hostels and schools, are listed in the *Activity and Hobby Holidays* booklet first published by the English Tourist Board. The majority of the holidays and courses are directed at children, either unaccompanied, in groups or with their families.

The types of activity on offer are grouped into three sections - sports, crafts and culture, with details of facilities, tuition and prices.

All the usual sports are covered and less common ones like bullioning and abseiling. Crafts include subjects such as video and car maintenance as well as more obvious artistic skills like pottery and spinning. As for cultural activities, these are extremely varied, ranging from astronomy to crime detection.

A record number of 1630 gardens, mainly private but open to the public at certain times, are described in the latest yellow guide of the National Gardens Scheme.

MEDIA

A star moves on

Huw David on 'Tucker's Luck'

CHILDREN'S TELEVISION

Tucker's Luck
BBC2, Thursday evenings
Beginning 10 March.

There comes a time when a man's gotta do what a man's gotta do. And that goes for BBC producers up there in the curving corridors of Television Centre as well as its lesser mortals. Pity the poor man, however, who was forced to bite the bullet and discharge cheeky Tucker Jenkins from *Grange Hill* a year or so ago. What a prospect, seeing one's programme's ratings tumble through the cruel exigency of the School Leaving Age. No other course (though; Tucker had spent his six years at the London comprehensive and emerged the other end without so much as a couple of CSEs) of the series demanded lie he dispensed with, star rating and all.

Dispensed with, but not forgotten. The BBC knows a good thing when it sees one. Hence *Tucker's Luck*, a shameless spin-off from *Grange Hill* in which young Jenkins and classroom cronies Tommy Wilson and Alon Humphries are fool-

loose, broke and jobless in the big wide world. Devised and part-written by *Grange Hill* creator Phil Redmond, the new drama series is aimed at the Tucker-aged audience; the 15-18 year-olds whom David Hargreaves, Deputy Head of BBC Children's Programmes, admits hit the Corporation "haven't served terribly well".

Like *Grange Hill* (and despite an initially curiously wooden script) *Tucker's Luck* sets out "to show life like it is". Broke and one of the three and a half million, Tucker haunts his local unemployment office. Parents in town ("All I'm saying, Alon..."), skinheads stalk the streets and girls just aren't around for the pulling. It's all there. And so is Tucker, played by 19-year-old Todd Carly. It is very definitely his series, which should please the millions of girls who turned into *Grange Hill* purely for a sight of him. (Though the fact that he appears in just his underpants in the very first scene of the first episode and in another sequence in the second is purely coincidental, according to the BBC; the plot just demanded it.)

Like it or not, Tucker seems des-



lined to become a symbol of his generation. Parents will probably complain about his feckless attitude - going in to sign on when he thinks he will, describing the counter clerk

at the unemployment office as a "stuck-up bitch" - but careers teachers at least will be gladdened to note he insists on wearing a suit to his first job interview.

BRIEFINGS

radio & tv

For schools

Let's Move! (Monday, 11.00 VHS)
A presentation of the complete story of "Dick Whittington and his cat" which five and six year olds have been working on for the last three weeks. The usual presenter's directions are not included to maintain continuity and listeners can hear a dramatized version in *Let's Move!* at 14.00 on Friday.

The Music Arcade (Monday, 12.00 BBC1)

A programme in two parts featuring, first, the London Youth Sinfonia rehearsing and performing "The Carnival Holiday" and part of Copland's "Appalachian Spring". Nine to eleven-year-olds can hear some of their own compositions to accompany "the fisherman" film.

Watch (Tuesday, 11.00, Wednesday, 14.01 BBC1)

"Carnival" shows primary school children taking part in the Commonwealth Institute's Carnival. Street bands and fancy dress play a prominent part. For six to eight.

Hustle Maths (Tuesday, 11.22, Thursday, 9.47 ITV)

"What would happen if...?" explores probability and stability. It introduces the over seven to geoboards, kite flying, a magician's act and the growth of a tree.

Rudolf History (Tuesday, 14.20 VHS)

Why did Jews migrate from Russia in the late nineteenth century? What made them settle in London's East End? 11 to 14-year-olds hear contemporary accounts of the living conditions and work opportunities of these refugees.

Seeing and Doing (Wednesday, 10.16, Thursday, 9.30 ITV)

A programme aiming to give six and seven-year-olds an idea of the past, in particular their own "Family Tree".

Continuing education

Communicatel (Tuesday, 14.00 BBC1)

This series for 13 to 16-year-olds who have difficulty in expressing themselves, ends by asking about the way short stories are written. How does a writer choose language and material to convey his ideas?

Living Language (Thursday, 14.00 BBC1)

Helen Cresswell, author, launches the Living Language/Puffin story competition.

Making a Living (Thursday, 11.15 ITV)

"Be Your Own Boss" is a number of case studies on young people who have started up their own business. The over 14s see the problems they overcome, the benefits gained and the sources of help available.

Me and My Car (Sunday on YTV)

Do-it-yourself expert Mike Smith turns his attention to the garage. With back-up from the AA he deals with cold-weather starting, engine mounting, brakes, clutch, gearbox, in fact anything that could go wrong.

Ark on the Move (Thursday, 14.00 C4)

Gerald Durrell travels from Jersey to Madagascar looking at contrasting attitudes towards animals. Also reveals how careful observation and watching can lead to an interpretation of animal language.

Tortured houses

Philip Venning reviews a new series on do-it-yourself

CONTINUING EDUCATION

Anything We Can Do

Channel 4

Thursdays 6.30 pm monthly.

In the old days you could pick out the tradesman by his overalls - white for painters, blue for plumbers - and each worn with a collar and tie. Modern builders are much more likely to turn up in bobble hat, old jeans and scruffy sweater, indistinguishable from the average do-it-yourselfer but not the actors in Channel Four's new DIY series. Judging from the opening sequences the cast of young couple and helpful interior do acquire some more suitable working clothes later in the series, but at the start they are conspicuously natty.

Realistic touch

This is an encouragingly realistic touch. Large numbers of twines simply do not own an ordinary grubby outfit for messing about in, and the young couple are supposed to be Londoners moving into a new house out of town. They are also supposed to be fairly green, so that we, the audience, can share in their journey of discovery, learning (eureka) that even simple building and decorating involves dirt, discomfort and disillusionment.

Here we have the modern answer to the fuddy-duddy old expertise, the chalk-and-talk of Barry Bucknell, who worked under ideal studio conditions, well away from the realities of sagging joists, Victorian pipework, and rising damp. So why are the series in a 1970s estate house where the structure has barely settled down? Presumably because of the recent mania for customizing houses.

No longer content to change the wallpaper, the new owner cannot leave the poor place alone, installing ever more luxurious bathrooms, kitchens, and goodness knows what other fad of the colour supplements.

Certainly the very first thing our team did was rip out a perfectly good looking sink unit and replace it with a remarkably similar one (admittedly re-siting it to a better position). This did provide an introduction to basic plumbing, though the episode could

not decide whether Inlath (the slide-tie figure) was a complete beginner, having never seen compression joints or s-traps, or, minutes later, an old hand fixing a waste with Boss White and putty. And this schizophrenic persists through the series, the inevitable result of an attempt to disguise instruction as discovery learning.

Tools are also a problem. In spite of odd references to borrowing or hiring them (the best idea for a special job) it does rather assume that Mr and Mrs Average have a well stocked kit. In the first two episodes alone, not counting those at the community workshop, they employ well over £100 worth of basic tools. Twenty years ago DIY was the preserve of the often thrice-up enthusiastic, and it is still hard to put its influence now that most young people have a go, not out of choice, but because of economic pressure and to some extent the expectation that this is the normal thing.

The next episode, to be shown on March 24, is a classic example of this influence at its worst. The young couple are shown making their own bed (literally) - the kind of keen carpenter's project that makes no sense at all for a young couple trying to get a house in order.

Unless they were really desperate for money, which they were obviously not, it would have been far more sensible for them to have bought a new - and much more comfortable - bed from a discount store. As it is I cannot think of a much quicker way of putting off the difficult do-it-yourselfer.

In advance

The secret of DIY is to decide in advance what to do oneself and when it pays to bring in a professional. A message the series has yet to convey. If a cookery series concentrated on the problems of unpredictable ovens and the ghoulishness of washing up, it would certainly give a more authentic impression of the process. But without the detailed ingredients and methods it would be a waste of time.

Heaven help anyone trying to tackle any of the jobs shown in this series on the basis of the programme alone. Bring back step-by-step instruction.

Media transplant

Carolyn O'Grady on video programmes for young children

VIDEOS

Nursery Rhymes
Golden Treasury of Classic Fairy Tales
Dinosaurs - fact and fantasy.
£29.95
Longmans Video

Nursery rhymes and classic fairy tales are an obvious choice for video and a good one for a book publisher with experience in both areas. Dinosaurs is another very visual subject with a special fascination for young children. With these three videocassettes Longman have scored a first in all three areas and are probably assured of a commercial success. However being first is no guarantee of quality and it may be asked if they wouldn't have done better to have given more time to producing some more polished productions.

Take *Classic Fairy Tales*, an opportunity you would think forsonic stylish animation accompanied by inspired storytelling, something for teachers and parents to offer to children as an alternative to the American stereotyping, Hannah Barbara. To some extent this is what you get. The storytelling is faultless; Sheila Hancock and George Cole are after all two very accomplished actors; the music is well chosen and the pictures are quite good. But this is all they are: pictures. The camera, abetted with some imagination, ranges over a picture book of classic fairy tales. And the question is: is this a justifiable use of an expensive and visually sophisticated medium? As one child with whom I watched it commented with some exasperation, "Why don't the people move on their own?" Why not indeed?

Nursery Rhymes is another odd transference of one media to another. It has been described with great accuracy by its publishers as "a video pop-up book", and it is a pop-up book on which real children perform to each nursery rhyme.

The result is often charming, but still rather static. Worse than this it is technically and artistically less than perfect. The superimposition of the children on to the book is often fuzzy and the children and sometimes even the adults look self-conscious, even embarrassed. Often it is dull and sometimes amateurish.

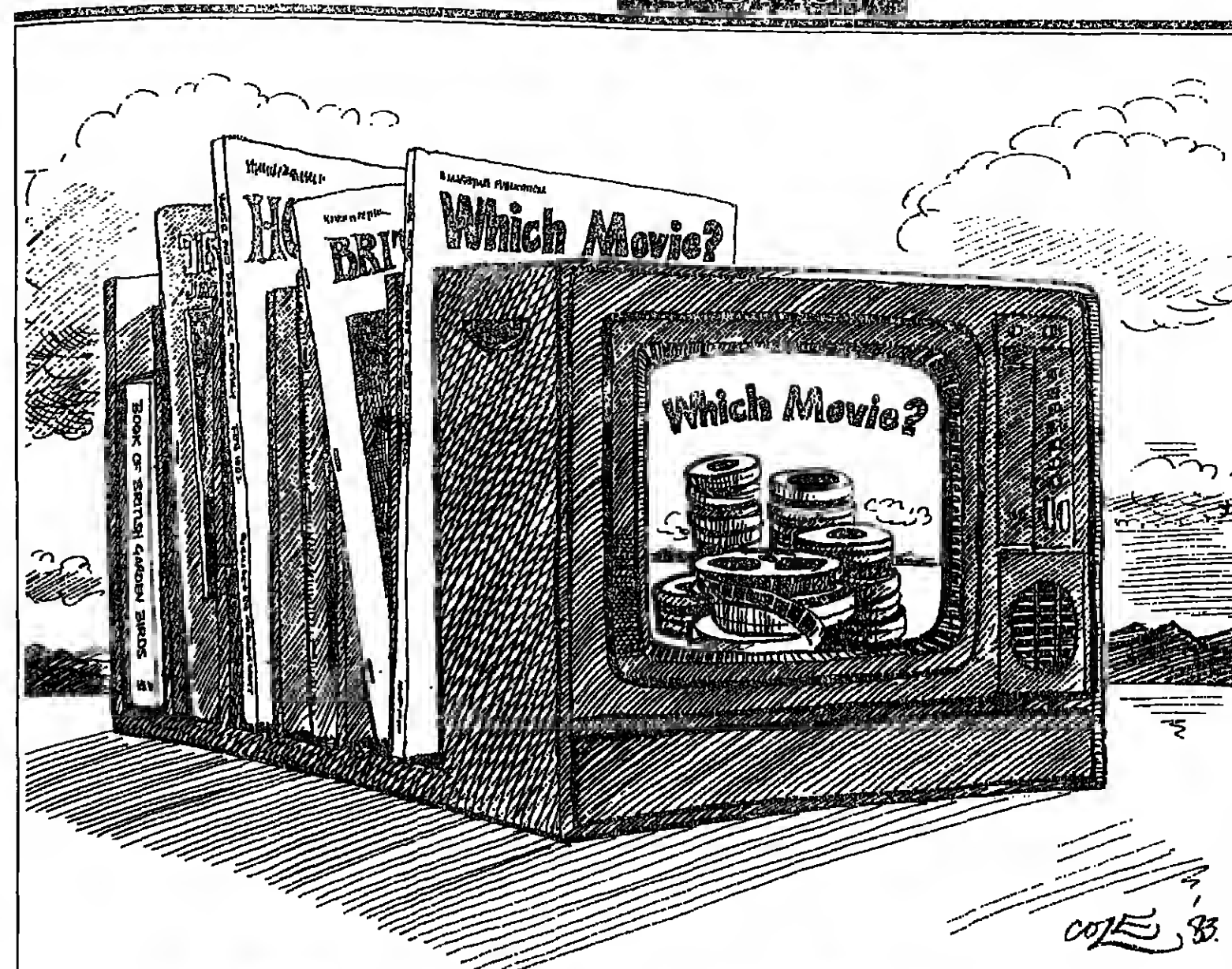
Dinosaurs - Fun and Fantasy is the most successful of the three. It

uses a wide variety of idiosyncratic techniques to get across some complicated ideas. Children are naturally interested in the idea of dinosaurs, monsters that actually lived, but it is difficult to develop that interest further than a knowledge of what some well-known beasts ate and did. Using film clips, catchy songs and a puppet called Coo the programme introduces the idea of the different types of dinosaurs quite effectively and also some interesting information about the discovery of the first dinosaur bones, the extinction of the dinosaurs and the relationship of dinosaurs to contemporary species.

However, on the evidence of all three of these videos, publishers should pause before they leap into video, and perhaps give more thought to the nature of the medium. First, it is television, and children are used to seeing technically first-rate productions on their screen; second, video can be played again and again, which suggests that, if anything, the technical standard should be better than that normally achieved by broadcast television. It also implies that the density of information both verbal and visual could be greater. Are publishers so unsure of the survival of books in the face of the onslaught of TV and video that they fear that the only recourse is to transfer the book on to the screen?



Developing an interest in dinosaurs



Visual magazines

The second issue of a new quarterly magazine about films was published recently. Called *Move*, it offers most of the ingredients expected of a magazine for a general audience: news of latest releases, reviews, star interviews and advertisements. But it has no text, it is not printed on paper, and it is not sold on newsstands. *Move* is one of the first mass-market "videomags". It is also an example of one of several ways in which major British book publishers are exploring the potential of video.

Far as long as low-cost domestic video has been taken seriously, traditional book and magazine publishers have realised that it could provide a medium for a new branch of their industry, complementary to rather than replacing the printed word.

Much of their hope was pinned on videodisc, which in the early 1970s was widely expected to establish itself as the dominant consumer video format.

Their ability to hold vast quantities of still-frame information, with rapid access to any particular frame, made videodiscs, as opposed to cassettes, the natural choice for video publishing. Thus the astonishing popularity of the VCR in the last three years, and the late start made by the videodisc in this country, has held back some of the more ambitious video publishing projects hatched ten years ago. Nevertheless, many publishers, especially educational publishers, are now working with video, whether to exploit the immediate potential of cassettes or the long-term potential of laser-optical discs.

The company which publishes *Move*, Catalyst Video, first attracted attention more than two years ago with a series of "watch-and-learn" magazine cassettes called *Rewind*, aimed at the youth market. Their success was noticed by Long-

man, which last summer made "substantial" capital investments in the company, enabling it to launch *Move* and to start work on other titles.

Catalyst now operates alongside Longman's film and TV production company Goldencrest Films, and has the resources to mount national sales and advertising programmes. The next venture is expected to be a rock music videomag, for which a ready-made audience is assured.

Less commercial videomags - usually with strictly limited local or cult audiences - are emerging from community groups around the country. The Institute of Contemporary Arts in London is building up a library of such productions as its Cinematheque in London. Indeed, anyone with a camera, video recorder and access to a duplicating house can go into production, but the limitations of simple editing techniques and the essentially linear nature of the videocassette programme tends to make the analogy with a conventional magazine tenuous, to say the least.

Magazine publisher IPC was an early entrant into the home video software market with a list of special interest titles and a bias towards sports. Despite some links with the group's magazine titles - with *Flight International* for its *Farnborough Airshow* programme, for example - IPC Video has never attempted regular, magazine-style video publishing.

A number of one-off book-and-video package deals have been made, such as the Collins/Polygram Video joint production *Lichfield in Photographs*. Popular encyclopedia publisher Mitchell Beazley two years ago formed its TV division, and entered a long-term agreement with Thorn EMI for development of book-related TV, videocassette and videodisc programming. First fruits of that partnership were fairly straightforward instructional cassettes on photography; the more ambitious projects, such as the production of an encyclopedia on video

Bill Hicks on video publishing



Top: from Longman's 'Nursery Rhymes'; below from Catalyst Video's 'Movie'.

disc, have been retarded by the indefinite postponement of Thorn EMI's VHD videodisc system.

Apart from its stake in Catalyst Video, Longman has also opened its own special video software division, publishing cassettes for the consumer market under the label Longman Video. The first 15 titles published last autumn included three original children's titles - *Nursery Rhymes* (described as a video pop-up book, and including about 70 rhymes spoken and sung by well known voices), *The Golden Treasury of Classic Fairy Tales* (animated retellings of six Hans Andersen stories, voices courtesy George Cole and Sheila Hancock); and *Dinosaurs - Fun, Fact and Fantasy* - the first in a series of "Video Explorers" programmes, mixing original film with clips from classic movies and shots of working models. Longman is also specialising in opera with three Verdis and a Donizetti in the first batch, all recordings of theatrical performances; and in classic European cinema, with three Ingmar Bergman films, de Sica's *Bicycle Thieves*, and Renoir's *Le Règle Du Jeu* amongst first offerings.

Not, perhaps, the most innovative video publishing, but certainly showing a willingness to cater for minority tastes, and certainly complementary to many of the group's printed materials, Longman Video's marketing manager David Risner sees the company as an adjunct of a book publisher rather than a video company tacked on to the old business. He sees strong similarities in the economics of book and video publishing. In both cases, projects have to be funded and sums of money raised, with the expectation of at least recovering the initial investment. But video publishing tends to demand extremely high production budgets. To create a programme that can stand repeated playback, the quality should be in all respects equal or surpass broadcast TV (the criterion of video excellence at the moment).

ADONIS changes publishing, from a "pushing-out" system to a "pulling-in" system. Students are supplied with exactly the articles they want, and pay for those, rather than what we decide to publish." Mr. Campbell says. "For that reason, I believe it can only improve standards in educational publishing."

If, as seems likely, ADONIS eventually succeeds, and spawns further acronyms electronic publishing systems, the future of the specialist, small-circulation journal in hard printed form must be in doubt. Few publishers, however, seem to regard video as a serious threat to the book for the conceivable future - only a really effective videodisc system can offer a genuine alternative and that only to the reference work; and the costs of production and playback equipment will remain prohibitively high for many years yet. It is perhaps significant that the one attempt in market in true video book is being made, not by a traditional book publisher, but by BBC Video, with its teletext-captioned laserdisc *Book of British Garden Birds*.

Longman will be releasing more titles in the same three categories this spring, and more again later in the year; eventually, it will produce more instructional programmes, and, "when there is a market", videodisc programmes. "Some of our programmes will also probably give rise to new books", Mr Risner says.

A group of specialist educational publishers is already very much involved with videodiscs, using the medium as a store for up to 50,000 pages of academic journals. The ADONIS project (Article Delivery Over Network Information Service) began about two years ago at a time when all publishers of highly specialist academic journals were becoming increasingly worried by the problems of "secondary publishing" - that is, the interlibrary loan of photocopies of parts of their journals. Although copyright law in the USA is now changing rapidly in the favour of the publishers, in many other countries, including the UK, it does not prevent indiscriminate photocopying, which in many cases, the publishers complain, is aided and abetted by state-subsidised photocopyists.

The idea of ADONIS is basically to attack the problem at source, by replacing the print-and-paper journals with a videodisc/high speed print-out system. Its early development has been carried out by a number of international publishers of STM (scientific, medical and technical) journals, represented by Blackwell Scientific and Pergamon in Britain.

One of the leading brains behind the project, Bob Campbell of Blackwell Scientific, is confident the main technical problems have now been solved. Using a high-speed scanning system to digitize the printed materials, and then "compressing" this information in a computer and transferring it to a Philips Laser-optical video disc, ADONIS is now able to produce about one disc a week containing 50,000 pages of copy, diagrams and halftones. Far higher standards of reproduction are available than with existing text transmission systems.

What ADONIS now lacks, Mr Campbell believes, is marketing. To be fully effective, it needs to be a completely open system with a network of "input centres" where any publishers can submit their materials for transfer onto disc, and of "output centres" in libraries around the world, where the disc store material can be printed out at the rate of about one page every two seconds. Mr Campbell hopes that it will be run by an independent trust, with no one publisher gaining a monopoly in any one market. Although a timely and ingenious concept, it seems that ADONIS requires more positive support from publishers and authorities. In its present form, it would probably not make commercial sense to institutions with an annual turnover of less than 50,000 documents - in other words, only major university libraries could probably afford an installation. But with more backing, it could become cheaper.

ADONIS changes publishing, from a "pushing-out" system to a "pulling-in" system. Students are supplied with exactly the articles they want, and pay for those, rather than what we decide to publish." Mr. Campbell says. "For that reason, I believe it can only improve standards in educational publishing."

If, as seems likely, ADONIS eventually succeeds, and spawns further acronyms electronic publishing systems, the future of the specialist, small-circulation journal in hard printed form must be in doubt. Few publishers, however, seem to regard video as a serious threat to the book for the conceivable future - only a really effective videodisc system can offer a genuine alternative and that only to the reference work; and the costs of production and playback equipment will remain prohibitively high for many years yet. It is perhaps significant that the one attempt in market in true video book is being made, not by a traditional book publisher, but by BBC Video, with its teletext-captioned laserdisc *Book of British Garden Birds*.

EXTRA

For O level:

Explaining Physics

Stephen Pople

A very readable text... Excellent value for money

This new textbook is clearly written in simple language and contains over a thousand illustrations to help convey information visually. Simple review questions follow each section, and there are examination-style questions on each major topic. Experimental details are not included, leaving teachers free to follow their own experimental programme.

352 pages 0 19 914085 5 £4.25

For CSE:

Steps in Physics

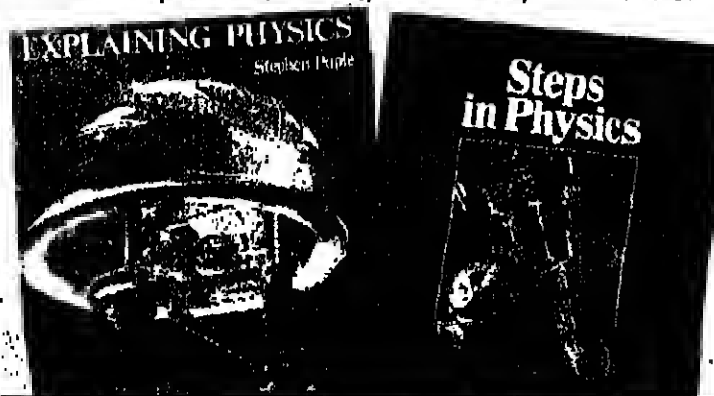
John Byron

Admirably produced, with text and an abundance of illustrations in good harmony

A comprehensive textbook covering all the material needed for CSE examinations. The sentence structure and vocabulary are carefully controlled to achieve a reading age of under 14. The text is clearly arranged in short sections with frequent sub-headings. Exam-style questions are included but experimental details are omitted.

200 pages 0 19 914088 8 £3.50

For inspection copies please write to: Oxford University Press, Education Department (EBL 390), Walton Street, Oxford OX2 6DP



Oxford University Press

Can your CSE pupils actually read their Science textbooks?

If you are familiar with this problem then I hope you will be interested to hear of our Science CSE course books:

Physics for You by Keith Johnson
Chemistry for You by W E Litcham
Biology for You by Clare Smallman

Each is a two-book course giving core coverage of CSE syllabuses. They are highly visual with photographs and large, clear diagrams to support the simple text. Material, wherever possible, is presented in self-contained spreads. But most important, all are written with a controlled reading age of 12 years with a key words glossary to explain the necessary, specialised vocabulary for each subject. But send for your inspection copies by completing the coupon below and judge for yourself.

Please send me the books listed below on inspection

Physics for You Books 1 & 2 by Keith Johnson £3.25 each

Physics for You O level edition price £4.95 non-net

Chemistry for You Book 1 and Book 2 when available £2.95 each

Biology for You Book 1 and Book 2 when available £2.95 each

Name _____ School _____

Address _____

To: Bob Osborne, Hutchinson Education, Freeport 5, London

W1E 4QZ (No stamp needed)

What next? continued

TABLE 1
Numbers entering examinations in different subjects (1981, England and Wales). Figures in thousands. (From "Statistics Relating to Education and Physics", Supplement 1982, Institute of Physics.)

| Subject | CSE entries | O level entries | A level entries |
|-----------|-------------|-----------------|-----------------|
| Biology | 206 | 233 | 411½ |
| Chemistry | 104 | 142 | 46 |
| Physics | 146 | 176 | 62½ |
| Science | 67 | 6 | — |
| | 631 | 657 | 139 |

| | | | |
|-------------|-----|---------|--------|
| English | 674 | 604 (a) | 61 |
| Mathematics | 404 | 322 | 80 (b) |
| Economics | 19 | 43 | 42½ |
| French | 166 | 162 | 26 |
| Geography | 202 | 200 | 32½ |
| History | 176 | 130 | 36 |
| | 661 | 635 | 136 |

ALL SUBJECTS 3,181 3,082 688

(a) English Language (b) Includes Pure Maths and Applied Maths counted separately.

TABLE 2
The eight frameworks identified by the Secondary Science Curriculum Review.

| | |
|---|---|
| a | A core plus options approach. |
| b | A two subject framework. |
| c | A co-ordinated science framework. |
| d | An integrated science framework. |
| e | A thematic and problem/issue centred framework. |
| f | A stratified framework. |
| g | A modular framework. |
| h | An interdisciplinary framework. |

with one class teacher; to secondary, with up to 12 specialists, may be lessened in future by such barrier breaking.

Specifying intentions
In most schools the days have gone when science teachers imagined that all that science was about was learning facts and formulae for the exam. The APIL has elicited a set of science abilities which are not very closely related to content, and earlier the science HMI published a very valuable list of science skills they looked for when undertaking their Secondary Survey. Nowadays most examination syllabuses list aims and assessment objectives covering a broad range, and the new 16-plus criteria (from the National Joint Council) do the same. It is widely recognized that if a course is to deserve the title science in any real sense, it must concern itself with many different skills (see Table 3).

Formerly, the idea was widespread that so called "less able" pupils could not undertake "higher level" activities such as problem-solving, analysis, evaluation; all they could be expected to do was remember. This fallacy is beginning to be recognized for what it is, not least because remembering is what the "less able" often find hardest. Given the opportunity to attempt more complex tasks, but without a heavy memory load, such pupils often surprise their teachers by their success.

The "graded tests" (or better "staged objectives") movement fits in with this shift, emphasizing what pupils can achieve rather than what they cannot. That this improves motivation and hence performance is not surprising, but certain implications need to be faced: differences in speed and in level of work become more conspicuous. Syllabuses will have to be rewritten, "from the bottom up" (to quote the Cockcroft Report on Mathematics), and not before time. While at present many mixed ability groups are taught as if they were homogeneous, that will become virtually impossible. New methods of teaching will have to be developed to enable pupils to progress at their own speeds and levels (perhaps along the lines of "Insight to Science" when taught as in-

tended). This leads naturally to my third theme.

Thinking of the pupils
The word "teacher" (or even worse "lecturer") carries with it a thoroughly misleading implication about how people develop knowledge and mental skills. In a very real sense you can never teach anyone anything — all learning is an individual matter. What the teacher has to do is to arrange things that individual pupils can learn — which includes instruction, but also many other modes. This perception is growing among science teachers, and many of them are beginning to make the effort involved in seeing learning from the pupils' end. This perhaps explains why they are often in the vanguard of the movement to introduce study skills, that is an emphasis for pupils on how one can learn

John Dawson is one of the ILEA Science Inspectors. The views expressed are his own and do not necessarily represent those of the ILEA.

TABLE 3
Extract from proposed 10+ syllabus (double subject) of the Southern Group of Examining Boards, devised by its SCISP Working Party, and still to be ratified.

Relative weightings of assessment objectives
The overall relative weightings of the assessment objectives (expressed in percentages) within the two parts of the examination are given below:

| Objective | Integrated Science Principles | Integrated Science Applications |
|---|-------------------------------|---------------------------------|
| 1 recall | 20 | 5 |
| 2 understanding | 8 | 20 |
| 3 select/arrange patterns | 16 | — |
| 4 use patterns | — | 25 |
| 5 critically analyse | 10 | 10 |
| 6 communicate | 8* | 10 |
| 7 applications | — | 10 |
| 8 social significance | — | 10 |
| 9 interaction of science/technology/society | — | 10 |
| 10 design of experiments | 7 + 8* | — |
| 11 performance of experiments | 8* | — |
| 12 reporting scientific work | 8* | — |
| 13 individual work | 4* | — |
| 14 work as part of a group | 4* | — |

* indicates objectives assessed by internal assessment.



effectively.

These are particularly relevant to helping to create equality of opportunity for all pupils, which one might illustrate by the current ILEA emphasis on the education of ethnic minorities, girls and the working class: making "how to learn" (as well as what to learn) a matter of importance to them can surely help them to achieve their potential.

I well remember that when we first distributed the APIL Student Handbook (which deals with how best to learn physics) the reaction from many A level students was "Why has no one ever done anything like this with us before?" Nowadays, fortunate pupils need such ideas at an early stage. Of course science does include new modes of learning not met in other subjects, but many of the study skills apply across the curriculum. Which brings us full circle.

References
Science Education 11-16, The Royal Society, December 1982 (free).
Science Education in Schools, DES, June 1982 (free).
Aspects of Secondary Education, HMSO.
Mathematics Counts, HMSO, 1981.
Advanced Physics Project for Independent Learning, ILEA and John Murray.
Insight to Science, ILEA and Addison Wesley.

John Dawson is one of the ILEA Science Inspectors. The views expressed are his own and do not necessarily represent those of the ILEA.



EXTRA

School chemistry — time for a face-lift

By E. Peter Johnson

Little research seems yet to have been done on how pupils perceive different school subjects, both in terms of their inherent difficulty and in terms of their relevance to the modern world.

One factor that will obviously influence the choice of a particular subject by a student is the personality of the teacher, but, this apart, some disciplines seem to have more built-in glamour than others.

Microelectronics and computer science seem to be rising stars for many in the firmament of the curriculum, for the moment outshining more well established subjects. Their progressive, forward-looking image contrasts strongly, in my opinion, with that of chemistry.

The basic reasons for this are not far to seek; that in the eyes of the pupil school subjects can be rated as "positive", "neutral" or "negative" and far too often chemistry is given a "miserable" rating, through no fault of the teacher.

Chemists have in many ways only themselves to blame. In recent years there has been an ever-increasing emphasis on chemical hazards, and also an awareness of the dangers of pollution, and consequential damage to the environment. In the United Kingdom, Friends of the Earth have flourished, while parallel groups have developed in many parts of the world, for example the "Greens" in Germany.

It is clearly right that part of the task of the chemistry teacher is to make pupils fully aware of problems arising due to the production of toxic chemicals. At the age of 15 plus the student should be able to develop an informed opinion on topics related to chemistry, such as acid pollution and acid rain produced via industrial discharges, but

this is being done almost too well, and is contributing to a somewhat negative image of the subject held by an increasing number of both students and adults.

It is very difficult to obtain unbiased factual information on how any given subject is perceived by the student. Questionnaires administered by chemistry teachers are obviously open to criticism, as students would most probably develop some inkling of the purpose of the questions and would show a tendency to give answers that they would think would be expected of them. However, these difficulties were partly overcome by arranging the administration of the questionnaire to be in the hands of other than the chemistry department.

Many questions were totally irrelevant, so as to throw the pupils off the scent. This approach has, I hope, produced some relatively unbiased and very interesting results. My concern about the image of the subject as perceived by the student seems to be confirmed by the results of this research, which although not rigorous, seem to point in the direction of some disturbing conclusions.

Approximately 200 pupils, ranging in age from 11 to 15-plus years (of both sexes) gave the following answers to a word-association test: of 15 words, 14 were designed to be neutral, for example "chip", "letter" and so on, and only one (unknown to the pupils) was relevant, the word being "chemical".

Results were then classified as negative, neutral or positive. Approximately 92 per cent of the replies could be considered negative, ie corrosive, poisonous, dangerous and explosive were common answers. About 7 per cent of the replies were neutral, answers being "Bio", "pet-

ro-" and "powdered" and less than 1 per cent were positive. One 11-year-old wrote "useful," this being the only answer in this category.

Although not intended as part of the exercise, the neutral word "rain" attracted a significant number of "acid's" to pair with it, which could be considered as a rather negative response.

The students were also asked to name famous authors, and two famous scientists. The first task was managed by 93 per cent, but only 65 per cent could manage the second, and of the scientists named practically all were mathematicians or physicists.

Students also indicated two substances useful to man, and two substances which could be considered harmful, and again there was a trend towards substances being automatically regarded as harmful.

A significant number of pupils could not think of one single useful substance, and as all the selected group were studying chemistry, something is radically wrong with the way the subject is presented. Perhaps most of the syllabuses contain a clue here?

More and more the presentation of chemistry is tending to become lop-sided. While admitting that dangers and hazards should be recognized, and the problems of pollution should be pointed out, there does not seem to be any comparable effort to point out benefits to mankind.

Where is the chemistry syllabus that even mentions the existence of such beneficial substances such as anaesthetics and analgesics? Where is a mention of the discovery, preparation, analysis and synthesis of insulin, with great benefit to sufferers from diabetes throughout the world? The Haber Process, with its capacity

to produce relatively cheap fertilizer has raised the standard of living and life expectancy of millions of people, but nowhere does this aspect of chemical industry rate even a mention.

On the contrary, emphasis is placed on the sifting of industry, atmospheric pollution and waste disposal. Important, but again a rather negative image is being presented.

Given that school chemistry courses must certainly look to their laurels if they are not to be outshone by perhaps more glamorous developments in other subjects, what can be done? Chemistry must be seen by the student as making a positive contribution to the welfare of mankind, and a radical change of approach at school level seems to be called for.

It is always easy to criticize, but what positive steps can be taken? I would like to see removed from all syllabuses any mention of the sifting of chemical works. A radical step, but so often this is a matter of political consideration, chemical factors taking very much a back seat. Job protection, export considerations and vote catching have no part in a school chemistry syllabus, and including them, if only covertly, underlines the rigid discipline of the subject.

Mention of pollution, end of the hazardous and poisonous nature of some substances requires an equal duty to include more positive aspects of the subject in the syllabus.

The following would be suitable in a course up to O level GCE:

1 The name and formula of an anaesthetic, including an outline of its preparation and purification for medical use. A suitable example could be nitrous oxide;

2 an historical approach to the story of nitrate fertilizers, leading from guano and South American deposits up to the replacement of these sources by nitrates derived indirectly from the Haber process, and the importance of this process for world food supplies;

3 a mention of the manufacture of drugs, ranging from the humble aspirin for the relief of headaches to more complex preparations used in the treatment of cancer and heart disease. It is not proposed that the formulae of these compounds should be known, but an appreciation of the chemists' role in their production is what would be looked for.

4 the formulae and properties of simple plastics such as polyethylene and polystyrene are of course already included in many syllabuses, but I would like to see this extended to have more emphasis on their everyday use, pointing out the very great difficulty there would be in replacing them in quantity with naturally occurring materials.

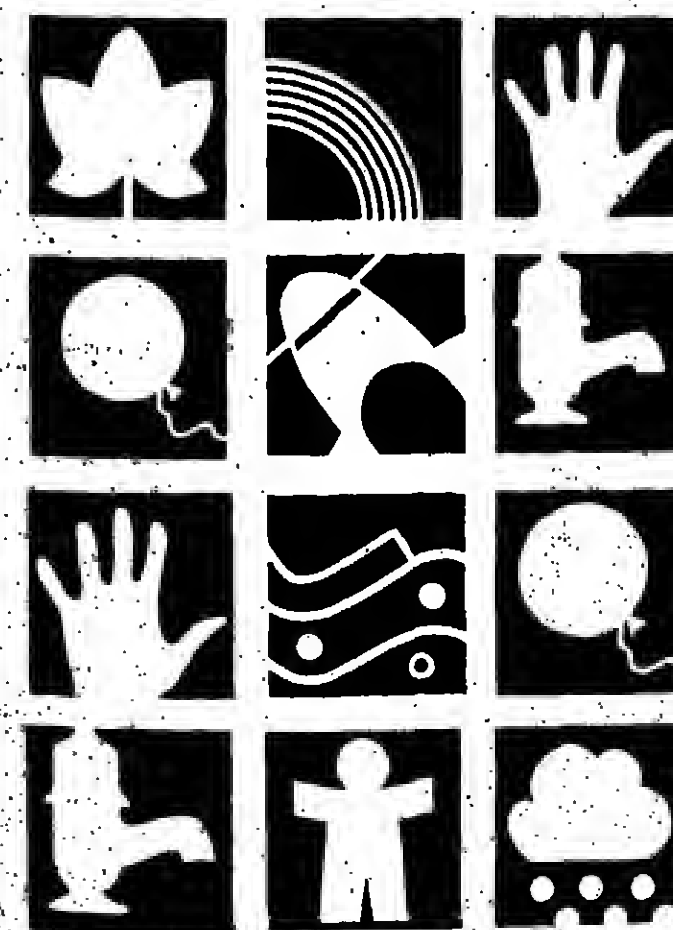
5 Finally, a more historical approach to chemical discovery would make the face of the subject more human.

Perhaps, if these alterations were made chemistry could be seen to be once more a useful, interesting and demanding subject, relevant to the world of today, instead of the picture which is now so often presented to the pupil as being over concerned with its negative aspects, and somewhat irrelevant to the future welfare of both the pupil and of mankind in general.

E. Peter Johnson is head of chemistry at Heversham Grammar School, Cumbria.

SCIENCE HORIZONS

West Sussex Science 5-14 Scheme



Science Horizons is a complete, structured science course. It was developed by teachers and educationalists in West Sussex specifically to help non-specialists to teach science with confidence to pupils of widely varying ages and abilities.

The scheme consists of a variety of practical work units carefully graded according to age range:

| Level | Age Range | School |
|---------|-----------|---------------------------------------|
| 1 | 5-8 | Infant, First |
| 2a | 7-11 | Junior, Middle |
| 2b | 10-12 | Upper Junior, Middle, Lower Secondary |
| 3a & 3b | 11-14 | Middle, Lower Secondary |

SCIENCE HORIZONS Special Features:

- Comprehensive coverage of a wide variety of subject areas — each unit is complete in itself containing background information and guidance for the teacher, worksheet materials for pupil activities and an assessment system.
- Detailed and specific science teaching combined with a simple, topic-based approach.
- Practical background information for the teacher and notes written in non-technical language.
- Gradual introduction of a more linear approach to science alongside the topic approach, bridging the gap between junior and secondary school science.
- In-built assessment and record-keeping to ensure continuous individual progress.

To find out more about Science Horizons, send for a free, fully descriptive brochure by completing the coupon below.

To: Karen Beddon, Promotion Department, Macmillan Education, FREEPOST, Basingstoke, Hampshire RG21 2BR

☐ Please send me a free Science Horizons brochure

Name _____

School _____

Address _____

Postcode _____

MACMILLAN EDUCATION

Macmillan Education, Houndmills, Basingstoke, Hampshire RG21 2XS
Telephone Basingstoke 29424 (STD code 0256)

Soft at the core

Peter Baron offers his suggestions for the science curriculum

The sixties was a time of considerable change in biology teaching. One saw then the emergence of new syllabuses slanted towards functional aspects of the subject and practical work assumed a new importance. In further and higher education, the national certificates and diplomas emerged as recognizable qualifications, and technical colleges in which these were taught were designated as regional institutions prior to becoming, in many cases, polytechnics.

This enhanced technical sector, together with universities old and new, put on offer novel degree courses which were themselves adventures. By comparison, the present time seems to be one of depression, though the term consolidation has been used.

Instead of the sense of purpose and fulfilment previously felt by many teachers and students, we are now faced with unemployment on all sides and potential poverty for many. Perhaps such a state has in itself caused a new mood of purpose to descend upon us, for it is generally felt that many syllabuses in science should be much more relevant to society as a whole.

At school level traditionally taught academic science, though it may be educationally viable in terms of assessing excellence, or the lack of it, does not seem to be suited to the cognitive abilities of many children. It has been said, for instance, that the major part of our current science teaching bypasses the majority in catering mainly for an elite.

Thus, for a child to be left in relative ignorance of appropriate scientific principles and applications at a time when technology, and consequently technological work, is becoming increasingly important, could lead to personal and social catastrophe.

Could the teaching be made significantly more relevant than it is? Could we fire the enthusiasm of our classes by relating the topics they are supposed to learn much more closely to situations which have a clear application either in the here and now or in work situations which may not be so far in the future? Recent reports seem to indicate that at least one authoritative answer, that of the Department of Education and Science, would be yes.

The relatively poor cognitive match which current science schemes make with the children for whom they are supposed to cater

obviously has some kind of connexion, not only with the level, but also with the kind of science taught. Much of this material derives from what might be called the hard core, that is physics and chemistry which are supposed to embody skills peculiar to themselves.

Biology, sociology, and psychology are regarded by many scientists as relatively soft. But, outside the establishment, there is considerable support for the idea that, properly taught, the soft subjects can provide a viable intellectual training at an acceptable range of cognitive levels. The recently published Royal Society report favoured the continuance of separately taught physics, chemistry and biology, but with adequate cooperation between those trained in the separate disciplines.

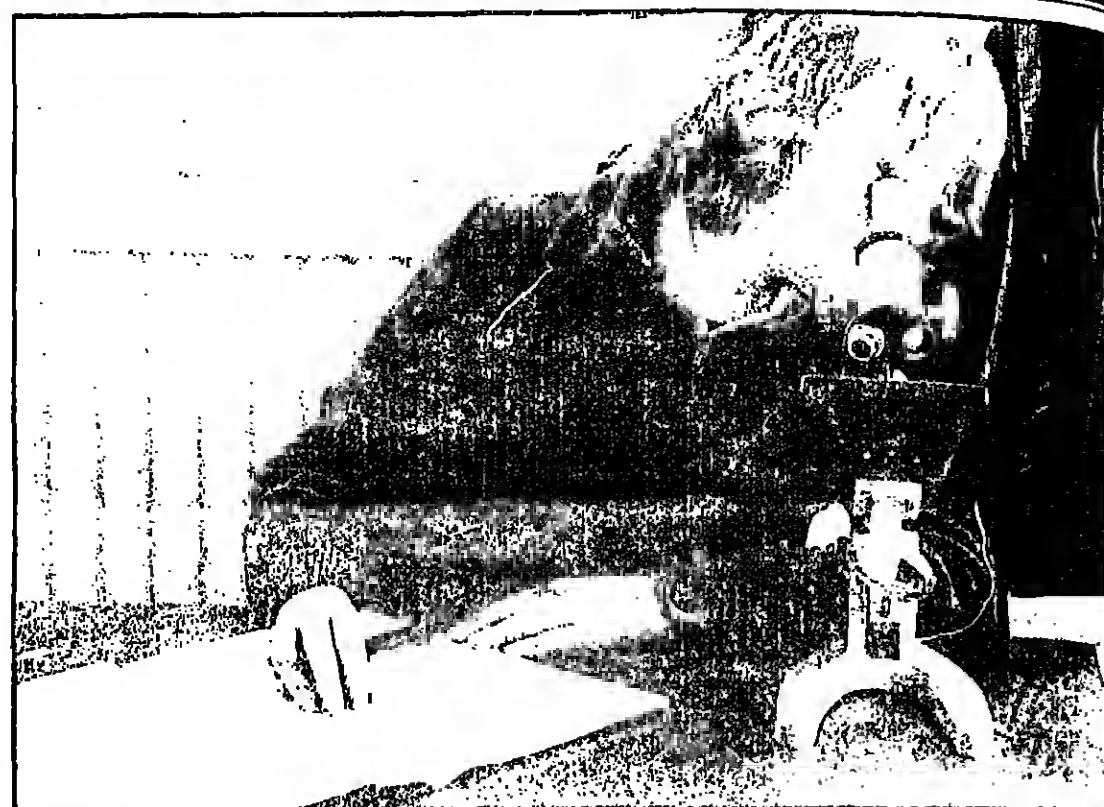
One may not doubt the possibility of such cooperation, but the practicalities are questionable. Is specialist team teaching an integrated syllabus acceptable? At least this method might ensure adequate dovetailing and hopefully encourage chemists and physicists to become involved in biology, even though the reverse is less probable.

In what ways can mathematicians participate in science teaching and are we not, in the end, within an area of combined science?

As a biologist, I naturally favour the teaching of my own subject. Why not weight science teaching towards biology? Many of the topics of both physics and chemistry are as well taught through the medium of biology as in their separate slots and the techniques and methods of social sciences can easily be embraced by ecology. Furthermore, valuable applied aspects, including those relating to biotechnology, applied computer science, food science, aspects of human biology and the environment at large fall within its sphere.

Staff wise, biologists are much easier to find than physicists, though chemists do not seem to be in short supply. The natural complexity of biological subjects enables differing topics to be taught in such a way as to provide an adequate challenge for varying levels of intelligence, without so much need for the separation of individuals with differing levels of ability.

As indicated previously, this line of thought implies substantial curriculum revision, if not revolution. Though it seems that here a decision in principle has already been made.



Inevitably, any such move would involve an examination of the basic approach to science teaching, and we might, despite the views of the emminences of the Royal Society, ask whether our methods in this area are in the best interests of the children concerned.

There is a distinctly academic look about science curricula, and biology is no exception. Might the situation now be comparable to that in modern languages some years ago. Then, the approach was, I think, more academic, because it was grammatical rather than conversational. To the ordinary person, who may have an innate grammatical competence in his native language, what matters is being able to communicate at almost any level in the language to be learned. Naturally, when successful, there is a considerable sense of achievement and the lessons received are immediately related to real life.

Some applied science is, of course, taught now, but it might be possible for first examination candidates to "cut the cucumber" by missing out some of the material hitherto regarded as sacred. This practical approach would, as I envisage it, inform mainly about the applications of science in society as a whole and provide minimal information about principles. An opportunity would thus arise for the omission of excess curricular material, though there would be a need for careful selection of that to be included so as to provide adequate depth and to avoid overloading yet again. But is

it really necessary to inflict an expanded repeat of the first and second year course on CSE and Ordinary level candidates?

Is there any evidence that an "applied" curriculum could provide a viable proposition? Well, more than one scheme exists within biology per se, for example the University of London's Alternative Biological Studies 804. This aims to enable pupils to study whole organisms and their relationships through a natural science approach so as to inform them about their immediate environment, increase their understanding of the relevance of biology to daily and encourage a respect for living things. In order to prepare for the examination, one must select to study one terrestrial and one aquatic habitat from a given list and this involves gaining a good knowledge of typical living things and their life histories, sampling techniques and behavioural relationships.

In addition, the habitats chosen must be used to provide information about food and energy relationships, various aspects of behaviour, population distribution and the interaction between the animals and plants of the habitat and man. It seems that those involved with this scheme like it, though the examination for Alternative Biological Studies only attracts about 1 per cent of the total ordinary level candidature in biology. This low level of uptake could be connected with the relatively restricted subject content of the course and a wider approach has been adopted in the "Science and

Society" syllabuses offered by the Joint Matriculation and London Regional Examinating boards.

Mechanisms already exist for the construction and implementation of the syllabuses which virtually dictate what, if not how, subjects are taught in schools. Naturally enough, as authors of school textbooks cater for the market as seen by their publishers. Their approach is sometimes educationally innovative, but is frequently so from the point of view of the subject. Indeed, much biological literature at this level tends only to put a new look on old subject matter.

Surely, there is scope for more foresight here. Short of presenting an alternative biology or science which nobody would buy, it may be possible to publish items which further towards illustrating every day applications of science, with some regard for the principles involved as well. SISCON, the movement for Science in a Social Context has already made a start on this and such extra material, as well as a data base for a variety of future applications.

In an environment where first examinations are mainly concerned with applied science what would happen at Advanced level? I would view A level as the stage where the principles and details could be pursued. Ordinary level could be pursued in essence, I am suggesting that this should be the level at which subject applications are examined in simple and direct terms, while those entering the sixth form should be the sort of students who can cope adequately with the inbetweeners. A similar premise would affect those undertaking an Ordinary Certificate or Diploma, though one would expect that here there would be a more specific pursuit of vocational topics.

For further reflection ponder, for example, the immediate real-life relevance of mass flow systems of plants, ATP and IAC interneurons in photosynthesis, the structures of mammalian blood vessels, an experiment to determine the surface of a privet leaf leaves water, a study of *Taenia solium*, the relationship of plant axons to light growth and tropic responses to light and gravity and the possibilities of back-tracking to such topics from practical applications. On the other hand items like the diseases caused by bacteria, protozoans and fungi, soil biology, flora and fauna, human genetics and practical examples of the limiting factors in photosynthesis would seem to be more suited to an applied philosophy.

Sticking my neck out? Maybe. But the views I have expressed are meant as contributions to a debate and could not possibly be regarded as complete.

Dr P J Baron is principal lecturer in biology, Polytechnic of The South Bank, London.

At their own rate

Denyse Lukowiecki on resource - based learning in biology

In the science department of St Augustine's High School Edinburgh, pupils in the first and second (integrated science) and third-fifth (biology, chemistry and physics) follow a course of resource based learning. This is a pupil-paced course where the pupils are provided with a study guide (series of worksheets). The pupils proceed through the study guide at their own rate. It seeks to use a variety of learning activities so as to maintain pupil and staff interest and motivation. The method used allows flexibility ideal for mixed ability groups.

In biology the course has arisen due to inadequacies which have appeared over the years. It became apparent that the majority of pupils entering O grade biology in their third year were unsuitable for an O grade course. A large number of the pupils were quickly overwhelmed by the depth of the O grade syllabus which they were expected to study. A result of this was a loss of interest over the first year of the two-year course.

The new course which has been developed over the last two years seeks to cater for all pupils entering biology. This includes pupils from all but the bottom 25-30 per cent of the year group. Pupils enter a CSE/O grade course, the decision as to what they will eventually sit being left till late in their fourth year. With the possibility of the development of Credit and General level in Scottish education I feel the approach is an ideal one and would adapt easily to any new syllabuses and developments.

The biology course has been divided into 27 units of work, nine of these based on all aspects of the O grade biology syllabus which could be considered environmental biology. All pupils are allowed to work at their own rate within each unit. For each unit the pupils are provided with a set of guide sheets, which direct the pupils to experiments, reading, note-making, listening exercises and demonstration posters and experiments. The apparatus required is kept within the lab in marked boxes. The guide sheets are reusable and are designed to be easy to follow and interesting in presentation.

One of our aims is to improve pupil reading and writing skills. At all times pupils are encouraged to write out experiments and notes in their own words. The teacher's role is one of a classroom resource, encouraging and helping individual pupils or groups of pupils. Occasionally, with more difficult topics, it has been found useful to hold small class lectures.

At the start of each unit the pupils are given an introductory sheet indicating the format of the unit (worksheets titles and activities). The pupils then work through a leaflet, usually four to six worksheets, at their own rate in groups of two or three. The core consists of the basic ideas and theories associated with a particular topic. The core is written at a level which hopefully all pupils can cope with. At the end of each core sheet the pupils' work is marked by the teacher and they are given a credit for each activity within that core sheet. This is intended as a regular check on the pupils' progress and as a motivating factor.

At the end of the core the pupils sit a quick quiz which consists of 15 multiple choice questions which are designed to highlight any problems the pupils may have had with any particular core sheet. These are normally remedied by the teacher. It is appropriate or possibly the teacher may direct the pupil to a remedial extension on that particular topic.

After the quick quiz pupils are directed by the teacher to an extension. For each core sheet there are normally three extensions. These can be remedial, further O grade material, SCE/general interest. Higher grade, whichever is appropriate for the particular core sheet, for example see table at the bottom of the page.

The teacher's decision as to which extension the pupil should follow is normally based on their assessment of the pupil's ability. It has been found over the two years that the original organizational problems envisaged with this did not arise. Normally the CSE-type pupil will cover all the core plus a few extensions while the good O grade pupil will cover the core plus all the extensions. We have found that pupils are keen to do work at home and many extensions have been written with this in mind.

At all times we have tried to make the topics covered more relevant to the pupils' everyday lives. This is why we have tried to build in extensions of general interest and do not keep strictly to the O grade which we feel is strongly lacking in relevance and can be rather dull to teach or learn. Added interest is also achieved through the use of VCR, games, crosswords and word searches.

The pupils keep a record of their work on loose leaf A4 paper kept in an A4 ring binder which is regularly checked at the end of each unit after completion of the unit assessment which all pupils sit at the same time. The test consists of two parts, the core (out of 20) and the extensions (out of 15). All pupils are encouraged to attempt all questions even though they may not have completed all the work. As an aid to revision the pupils are given a list of core and extension objectives upon which the test is based.

The nine field studies units are dealt with in a similar way but are written up in a separate field studies notebook. These units are interspersed with the other units at suitable times in the year (summer - work on distribution of organisms). This part of the course includes a whole-day field trip to a local environment and four half-day field trips to local environments such as a canal or deciduous woodland. The pupils are expected to write up the visit during follow-up work in the lab.

The overriding aim in the development of this course was to make the O grade syllabus more appropriate and relevant to the majority of pupils entering O grade biology in our school. The course is still developing and is by no means complete. Already we can see deficiencies in some of the materials we have produced and are constantly monitoring pupils' reactions to these so that we can make necessary changes. However, our overall feeling in the department is that we have something which is ultimately more satisfying and motivating for both pupils and staff.

Denyse Lukowiecki is principal teacher of biology at St Augustine's High School, Edinburgh.

Denyse Lukowiecki is principal teacher of biology at St Augustine's High School, Edinburgh.

Denyse Lukowiecki is principal teacher of biology at St Augustine's High School, Edinburgh.

Denyse Lukowiecki is principal teacher of biology at St Augustine's High School, Edinburgh.

Denyse Lukowiecki is principal teacher of biology at St Augustine's High School, Edinburgh.

Denyse Lukowiecki is principal teacher of biology at St Augustine's High School, Edinburgh.

JOHN MURRAY SCIENCE BOOKS

Science for Today and Tomorrow
M.A. ATHERTON, T. HUNTER, D.G. MACKRAN

This book, by three of the best-known authors in school science teaching, has been written to meet the need for a concise, simple and authoritative text covering the syllabuses of current CSE, O level and equivalent courses in General Science and Combined Science.
07195 1008 8 probably £3.50
Publication: Summer 1983

Adventures with Small Plants
OWEN BISHOP

Likely companion to *Adventures with Small Animals*, this attractively produced book contains a range of simple, interesting and instructive projects which will provide a useful source of project work in a wide variety of biology, environmental science and rural studies courses in middle and secondary schools up to CSE level. The two books will appeal to younger children who want to study small plants or animals at home.
Limp 07195 3978 8 £2.95
Hardback 07195 3953 6 £4.95 net
Publication: May 1983

Adventures with Small Animals
OWEN BISHOP

Limp 07195 3930 7 £2.95
Hardback 07195 3944 7 £4.95 net
Just published

Class Experiments in Biology
D.G. MACKRAN, C.J. WOODLEY and P.C. WORSLEY

Here are clear, straightforward instructions, plus follow-up questions, for 40 important biology experiments suitable for the vast majority of students following CSE, O level and similar courses in the UK and overseas.

The experiments have been developed from Mackran's widely used series *Experimental Work in Biology*, but the instructions have been recast and simplified to a level of extension testing with students with a wide range of abilities. The teachers' book details the apparatus, materials and preparation required, and contains a worksheet for each experiment which may be copied without fee for use in the school or college by which the book is bought.
Students' Book 07195 3852 1 £1.50
Teachers' Book 07195 3453 X £3.25
Just published

Experimental Work in Biology 9
Transport in Plants
D.G. MACKRAN

This book of 16 classroom-tested experiments using schools and whole plants completes the highly regarded *Experimental Work in Biology* series. Like the other books in the series, it is appropriate for students throughout an O level course and into A level, and contains detailed, explicit instructions with follow-up questions intended to promote critical thinking about experimental design and interpretation of results.
Students' Book 07195 4064 X 95p
Teachers' Book 07195 4065 5 £1.05
Publication: June 1983

Experimental Work in Biology:
Combined Edition
D.G. MACKRAN

The nine manuals in the *Experimental Work in Biology* series are brought together in this volume to form the most comprehensive single collection of validated biology experiments for O level students ever assembled. The content and structure of the book are so designed that it can be used as a resource for practical biology extending over the whole of O level and into A level.

Students' Book 07195 4013 5 prob. £3.25
Teachers' Book 07195 4014 3 prob. £3.75
Publication: June 1983

Test Your Biology
C.J. CLEGG and A.E. POUND

An extremely wide selection of validated structured questions offering continuous assessment and test material for students following any of the current CSE, O level and similar courses. The selection represents a careful balance between 'traditional' (fact oriented) and 'progressive' requirements.
Questions Book 07195 3883 7 prob. £1.95
Answers Book 07195 3892 X prob. £2.25
Publication: June 1983

Introducing Biochemistry
E.J. WOOD and W.R. PICKERING

Sponsored by the Biochemical Society, this clearly written and carefully organised book is designed primarily for A and S level Biology and Human Biology courses, and for TREC Biochemistry III, though the content and approach will appeal to students following a wide variety of courses at a higher level.
07195 3897 1 £3.50
Just published

ILPAC
Independent Learning Project
for Advanced Chemistry

ILPAC has been developed over six years and has involved an extensive trials programme with students representing a wide range of backgrounds and abilities in a great variety of schools and technical colleges both in and outside London. The result is a complete, highly detailed course for students working towards any of the current A level GCSE examinations in chemistry, as well as various TREC II and III programmes, which is likely to have a great influence on chemistry teaching at this level on APT II. (*Advanced Physics Project for Independent Learning* - also published by John Murray) has led on the teaching of physics.

Units for the first year - *Students' Guides*:
S1 The Mole 07195 4036 0
S2 Atomic Structure 07195 4038 4
S3 Chemical Energetics 07195 4037 2
S4 Bonding and Structure 07195 4038 0
S1 The Gaseous State 07195 4038 6
S2 Equilibrium in Principles 07195 4140 2
S3 Equilibrium in Acids and Bases 07195 4041 0

O1 Hydrocarbons 07195 4045 1
I1 S-Block Elements 07195 4046 8
I2 The Halogens 07195 4046 X
Probably £2.25 each

Complete Set of Teachers' and Technicians' Notes for First Year Units
07195 4050 1 price to be announced
Publication: September 1983

10 Units for the second year are in preparation for 1984.

Investigating Electricity
PETER WARREN

A progressive series of over 60 experiments and projects with additional games and quizzes, all designed to ensure that students not only learn basic ideas and technology but thoroughly enjoy the process. The material offers a sound introductory course for use in the middle and lower secondary school, and has also proved effective with less able 16 and 18 year olds.
07195 4010 4 £2.95
Publication: May 1983

Success in Electronics
TOM DUNCAN

A comprehensive basic course on both analogue and digital electronics by an author well known for his ability to communicate sophisticated ideas in a straightforward, enjoyable way. Practical in approach, the book is designed for TREC, City and Guilds and GCE O, AO and A level courses, but is equally suitable for home enthusiasts.
07195 4016 1 £4.75 net
Publication: June 1983

Adventures with Astronomy
PERCY SEYMOUR

More than a series of interesting projects, this book offers a carefully developed introduction to practical principles of elementary astronomy. Written in two colours and lavishly illustrated, it will be especially suitable for school science and astronomy clubs, and for CSE and O level project work.
Limp 07195 3931 5 £3.50
Hardback 07195 3945 5 £5.95 net
Publication: May 1983

Physics: A Textbook for
Advanced Level Students
TOM DUNCAN

This new, single-volume version of Tom Duncan's famous pair of Advanced level textbooks, *Advanced Physics: Materials and Mechanics* and *Advanced Physics: Fields, Waves and Atoms*, uses the text and structure of the updated second editions but is presented in a two-column format on a larger page than the separate volumes.

Ideal for all A level students. *Physics Education*
Limp 07195 3889 0 £8.50
Cased 07195 3895 1 £9.95
Just published

Inspection copies
Please tick the titles or catalogues required and return this advertisement with your name and address to John Murray, FREEPOST, London W1X 4BP (no stamp needed).

Catalogues: Physics ☐ Biology ☐ Chemistry ☐
Name: _____
School/College: _____
Address: _____

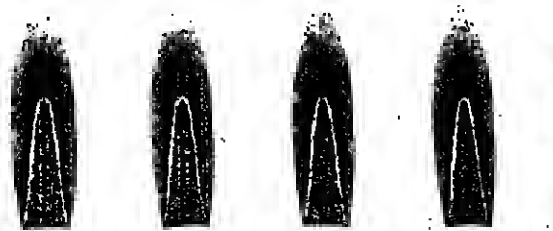
THE 'GASS' BOOK FOR SCHOOLS.

'Gas Applications for School Science' is a teachers' resource book published jointly by British Gas and the Association for Science Education.

Prepared by twenty-six science teachers, 'The GASS Book' demonstrates the relationship between scientific principles taught in school and their industrial applications.

The book contains lesson plans, worksheets and resource material and was written following visits by the contributors to British Gas research establishments.

The material relates to physics, chemistry and biology and covers the whole of the secondary age range.



To: Education Liaison Officer, British Gas, Room 707A,
326 High Holborn, London WC1V 7PT.
Please send me _____ copies of "The GASS Book" at £2.95 each.

I enclose a P.O. or cheque made out to British Gas ☐
I enclose a local authority requisition (accepted only for amounts of £5 or more) ☐
Please send me the 1982/3 Education Service Catalogue ☐

NAME: _____
ADDRESS: _____

GAS REGION: _____

RESOURCEFUL TEACHING AIDS - FROM THE GAS PEOPLE.

Help for biology students

NEW

Biology, A Functional Approach Study Guide

J Brightman and S Parker

This new *Study Guide* has been written with the specific aim of helping A-level biology students to acquire the necessary skills used in note-taking, practical work, revision and answering examination questions.

The *Study Guide* is designed to accompany the third edition of *Biology, A Functional Approach* and is divided into three parts:

- * Part 1 - the skills of reading, note-making and retaining information
- * Part 2 - applying these skills to the chapters in *Biology, A Functional Approach*, questions of examination standard and questions drawn from past papers
- * Part 3 - methods of biology and the means by which biological information is communicated, observation and the recording of observations, the use of hypotheses, the design and writing up of experiments, and the interpretation of results and advice on how to approach examination questions.

Publication May 1983

0-17-448046-6 about £3.50

To obtain an inspection copy or further information about the complete A-level course, *Biology, A Functional Approach*, simply complete the attached form and send to the FREEPOST address.

Please supply:
Biology, A Functional Approach
Study Guide
Biology Catalogue

Name _____

School _____

Address _____

EXTRA

Finding something of themselves

By Jane MacRae

Science is a wholly human, living subject: it is after all an offspring of the human being, he creates it with his body, mind and even his heart - for inspiration, enthusiasm, and reverence are not unknown to scientists.

Does the current approach to science allow children to appreciate fully its human, living nature or do they see it as a mechanical, fixed body with unattainable mind and no heart? And why does this matter anyway? It matters because it is this human aspect of science which can be directly experienced by all children; it is this aspect which is potentially the most immediate and profound, and it is this which may mean most to those who find the mechanical "body" of science difficult or unappealing.

One could say that it is such human experience which makes science really "relevant", though I use that tired word not in its popular sense - associated with on-going, personal sense, which derives from the Latin *relevare*, meaning to uplift or to raise up.

In order to make science education uplifting and immediate the whole person, that is his body, mind and heart or inner being, are taken into consideration. Different aspects of science education are appropriate to uplift different aspects of a person.

Taking the physical body first, we must educate the five senses, for surely accurate observation, so necessary for science, is impossible without acute, finely-tuned senses?

Whilst the senses of young children may already be acute, children over 10 seem to need this training more urgently. It is a singularly practical matter for which no expensive equipment is needed. There are various exercises in which one sense at a time is focused on: for example, by being blindfolded when studying taste or smell. Each person is given something to smell (or taste) but they must not know what it is.

In the case of smelling, damp soil is very good to start with. The class must get to quiet and still as possible - the novelty of the situation may help to meet this tall order - then they can smell the soil. A first reaction is usually some sort of repulsion. At this, I would point out that we are not interested in whether they like it or not; such opinions are not useful for a scientific investigation. So we aim to get quiet and still again and make a deliberate effort to focus total attention on the smell; this time each should ask himself what he knows about the soil whilst smelling it. This can be done for a minute or two depending on how long attention lasts.

Finally, blindfolds are removed and as many as is practical give their observations to the class. It is only when these observations and experiences are formulated and described (even if a little help is needed for some) that the full value of the exercise becomes obvious.

What may sound to you too simple to have anything in it, has yielded observations of surprising depth and precision from children of all abilities and a wide age range. For example, children who had never given soil a moment's thought have said that it smells old, even ancient, yet new and fresh. It is as if they directly appreciated something about soil formation and fertility. This could even be developed into a topic later. Other children, when smelling a freshly cut apple, observed a hint of similarity between the apple and the soil which they described as a living, earthy smell. It is one thing to be told that food grows from the earth but a totally different thing to know it from experience.



Photo: Betty-Richard Goss

That the senses engage a person so immediately and so simply and yet with such depth, may account for the unexpected happiness and enthusiasm that children feel whilst doing these exercises. It is this happiness which convinces me that education of the senses is a way of uplifting a pupil.

One further use of sense education is that it gives the teacher an opportunity to show that all knowledge, concerning every aspect of life, must initially be received through the senses: it is as if the senses are a person's gateway to the world and hence the importance of having them in tip-top condition. Health education could therefore be approached from this angle, for example, how can someone be aware of what he is feeling his body? An acute sense of taste will tell him much. It is an amazing sight to see a class of children actually tasting that fresh apple and sensing for themselves its nourishing and refreshing qualities. On this I Capra in *The Turning Point* says: "we have forgotten how to 'think' with our bodies, how to use them as organs of knowing. In doing so we have also cut ourselves off from our natural environment."

Once this living contact with the world is made using the body, we can consider how the intellectual and major part of science education can uplift the mind. For this end the principles and concepts already in a syllabus are made the central point of study. It should be said that the key concepts and principles are here interpreted in their broadest possible sense since the aim is to develop flexibility and depth of thought and allow the concepts to become immediate human experience; a final truth is not sought.

These principles or concepts are explored and developed through five steps:

- 1) The key principle or concept of a topic must be identified.
- 2) It should be understood in the context of the science being studied.
- 3) Other sciences are looked at to see if it occurs within them.
- 4) The same is done for non-science subjects.
- 5) The significance of this principle or concept to the pupil's own life is explored.

For example, the study of acids, bases and salts in chemistry may identify neutralization as the key concept (step 1). For step 2, titrations, relevant calculations and ionic equations serve to expound the concept. In step 3 static electricity in physics brings in the idea of electrical neutrality. In maths, the fact that adding the same number of pluses and minuses gives zero could raise a question of whether zero is a type of

"neutrality" and if neutrality is a "everything" or a "nothing", it steps 4 the neutral gender which occurs in some languages can be discussed: how does it differ in implication from the usual male versus female perception?

For step 5 the concept of neutrality can be made immediate by experiencing it through taste. For this, fresh lemon and milk of magnesia are tasted separately and then together, until neutralization is reached. A class described the sensation of neutralization as "taste" and complete, in contrast to the sharp liveliness of the lemon and the dullness of the milk of magnesia. After this we discussed what a valuable asset such a neutral condition of mind would be in everyday situations where tempers get out of control, for example.

Exploration of concepts in this way does not take long and is extremely worthwhile. It uplifts the mind, firstly by bringing a unity and significance to the subject, and secondly by transforming distant concepts into immediate human experience.

Finally, there are occasions when something in science education touches the heart or inner being of a pupil. From my observations of working in this way it can be the precise, fine use of the senses or the clarity arising from exploration of concepts which brings an inner satisfaction seldom found in life. And often this satisfaction is felt by those whose intellectual limitations would have excluded them from a science education, had it not been limited on far all.

I hope that by bringing out the human nature of science all children will find it uplifting: those who become scientists will bring a depth of perception to their work whilst those who will never remember a word of the "body" of science will not forget the taste of its mind and heart.

R W Emerson in *Selected Writings* says "Nor has science sullied humanity, so long as the naturalist overlooks that wonderful something which subsists between man and the world; of which he is lord, not because he is the most subtle inhabitant, but because he is its heart and finds something of himself in every great and small thing. The perception of this makes the attraction which draws men to science."

Dr Jane MacRae is head of science at St James' Independent Day School in London SW7. She will be giving a talk/practical session related to the contents of this article to the West London Section of the ASE on May 10.

EXTRA

Performance report

Michael Savory reviews "Science in Schools. Age 15"

The work of the Assessment of Performance Unit has reached the stage when a report has been published on the scientific performance of the 15-year-old based on a survey in November 1980. Three reports on scientific performance are now available, at 11 years, 13 years and 15 years.

This present report maintains the quality and interest of the previous reports. However, to gain the most value from the APU work it is necessary to examine the full report.

It is sad to have to record the difficulty this writer had in obtaining a copy. The government bookshop in Bristol appeared to have an internal conspiracy to prevent me purchasing the report. One can too easily be discouraged by statements, two weeks after publication, that state, "It is not published and we have no date" and "We can not give a delivery date".

However, with the aid of a friendly science adviser I succeeded in reading the report. The immediate reaction is to realize that yet again press releases and summary reports do not give a proper picture of the full publication. It is to be recommended to all that they should leave no stone unturned to obtain a copy of this report *Science in Schools. Age 15*.

The report is divided into three sections. The first giving information about schools and pupils and providing details of the sampling procedure. The second section covering several chapters examines pupils' performance in the various categories of activity. Finally, overall performance profiles are provided with some correlation with other variables. There is no attempt to assess individual or school performance, the examination levels of performance in science activities is the prime aim.

In 1979 the Secondary Survey examined science provision, the APU report examines the same topic in a much more easily understood way, bar charts and pie charts abound. As with the Secondary Survey, the results do not provide any comfort or sense of complacency in any area, whether it be laboratory accommodation, technician support or pupils not studying science. The similarity of findings of the APU and the HMI survey should make teachers, advisers and administrators think carefully about the resources now being made available.

The assessment framework of the survey is explained and supported. The chapter devoted to the categories of the assessment will provide a considerable resource for teachers who wish to improve their own techniques in pupil assessment. There is considerable emphasis on the need to consider the objectives of questions before making assumptions on the nature of the answers.

The APU science team has gone to considerable lengths to avoid repetition in its questions being simple recall. These lengths do not appear to have included the use of material that is non-relevant or more imaginative than real.

There are many constructive ideas in the various appendices especially in the development of categories within which tests can be framed and in the selection of questions from a bank. Useful though the various appendices are, readers should be warned that the content list is not intended to be comprehensive nor to be APU recommended.

The report examines in detail six categories of tests dividing equally

into practical and written. The practical tests were using instruments and measurements, observations and performing investigations. These practical tests were administered by a team of practising teachers, the instructions prepared for their use show the care taken to make the assessment fair and reliable. It may not surprise some teachers to learn that pupils show a lack of expertise in reading a variety of measuring instruments.

The results from the design of investigation section are not conclusive although this may be due to the novel situations framed in the questions and perhaps the lack of any chance of demonstrating their ideas. This is clearly an aspect of the testing in that questions require careful reading and should be followed by written answers.

The wide range of questions used in the survey are illustrated by a considerable number of examples in the text. These enable teachers to appreciate the levels of the answers reported. It is difficult to detect from the levels of the responses whether pupils' performances match their ability. The results of future surveys will show how achievement changes but will probably not show whether pupils are achieving to their own ceiling.

The chapter on overall performance is illustrated by a set of charts showing performance levels and marking the 95 per cent confidence level, this makes much clearer what could be a confusing set of data. Evidence of a relationship between performance and laboratory facilities and support was found, as was a relationship between performance and uptake of free school meals. The report quite rightly avoids drawing conclusions from the results

and leaves that exercise to the reader. This leaves the reader with the onus of careful reading, studied inference and action. The matters for discussion raised by the writers of the report include the balance of activities in science lessons, the possibility of including experimental design into schemes of work, the desirability of reduction in content to enable pupils to apply their knowledge.

The report *Science in Schools* will be of considerable use to science educators and provides a valuable addition to the first two reports on science. It supports many of the results of the secondary survey and the experience of many science teachers. The Royal Society recent

report on science education called for a reduction in content, an increase in resources and a review of the 16-plus examination all of these threads can clearly be discerned in the APU report.

If future reports from the APU team are as constructively informative as this report then the improvement and effectiveness of science education in our schools will be given a considerable boost. I can do nothing more than impress on all the need to read and note the comments of this valuable report.

M J Savory is immediate Past Chairman of the Association for Science Education.

Much to intrigue

Multiple Choice Questions for A-Level Physics. By W Bolton. Butterworths £3.50, 0 408 10854 1. Comprehension and Data Analysis Exercises in Advanced Physics. By A Rees and C Spencer. Harrap £1.95, 0 245 53553 5 The

The lengthy titles of this pair of books clearly explain their content and aim. Mr Bolton has prepared 9 tests, each containing 31 questions, to which answers have to be chosen from a given set.

He details the variety; in a multiple choice of question the student must select one of five suggested answers; multiple-choice questions have a choice of three responses, any or all of which may be correct; and classification sets begin with five statements (or quantities or relationships or graphs or the like) to be associated in a specific way with members of a group of questions.

Mr Bolton's compilation, covering all these types, should be adequate for most A-level courses. So, in a different fashion, should the Harrap book. In this, appendices provide hints on ways of tackling the exercises, and to possible answers. Thirteen comprehension exercises have such themes as a new approach to carbon-dating, non-destructive testing, satellite communications, optical monitoring of high voltage circuits, and laser pacemakers. Questions test powers of understanding, deduction and application; and, like those in the data analysis section, invite follow-up work and further investigation.

As the authors suggest, "any good A-level student should be willing to do some extra reading". Certainly anyone interested in the subject will find much to intrigue in the pieces on, for instance, solar heating, alpha particles, elasticity or electric motors.

Dr Johnson may have believed that questioning is not "a mode of conversation", but it is undoubtedly a mode of determining the degree of knowledge acquired and of stimulating interest. These books fulfil such purposes admirably.

F W Kellaway

Success in Science

Biology Today

A course for first examinations

M D Robson and A G Morgan

"Liked the straightforward approach of this book which I would rate as one of the best first biology texts for many years."

Times Educational Supplement

As soon as it was published, *Biology Today* was recognised as one of the best CSE textbooks on the market. Seventy chapters presented as independent double-page units make up the course, giving comprehensive coverage of the syllabus. Features which make the book so popular are its direct, easy-to-follow text and its full, clear illustrations.

176pp Limp 0333 22359 4 £2.95

Human Biology Today

A course for first examinations

M D Robson and A G Morgan

From the authors of the highly successful *Biology Today* comes this coursebook in human biology which brings to the subject the same lively approach, the same clear format and the same essential coverage as its companion volume. Rigorous trials in the classroom have been carried out to ensure that all pupils gain a good grasp of the basic concepts.

176pp Limp 0333 27879 8 £2.95

Life: Form and Function

Second Edition

CV Brewer and CD Burrow

"Excellent value in its coverage and factual content..."

Times Educational Supplement

Life: Form and Function is the first O level textbook to link biology to the world in which we live. The second edition of this book has been revised to bring it into line with current examination syllabuses. The book describes the functions of living organisms in relation to their form, and examines the position of man in the ecosystem and his influence on the environment. Factual information is presented visually wherever possible, and the text is clear and concise.

280pp Limp 0333 27181 9 £3.75

A Foundation Course in Chemistry

Bryan Slater and Joff Thompson

Recently published as a one year introductory course, *A Foundation Course in Chemistry* is geared to the diverse needs of a wide range of students. The course has been fully class-tested and proven to be accessible to students of all abilities. It can be used by specialist and non-specialist teachers alike, and its highly logical structure and carefully chosen language guarantees a thorough grasp of the basic principles of chemistry. Complete with photographs, diagrams, experiments, questions and extension material.

188pp Limp 0333 25515 1 £2.75

Physics - A Practical Approach

O N Bishop

Within the four hundred pages of this important physics textbook every O level Physics topic is covered in a clear and easily understood combination of traditional and enquiry methods of learning. Hundreds of varied and original experiments and investigations support the factual information essential for examination success. Diagrams, photographs and practice questions reinforce the straightforward text.

414pp Limp 0333 22593 7 £4.25

Send now for inspection copies

Please send me inspection copies of (tick as required)

.....Robson and Morgan: *Biology Today* 0333 22359 4 £2.95

.....Robson and Morgan: *Human Biology Today* 0333 27879 8 £2.95

.....Brewer and Burrow: *Life: Form and Function* 0333 27181 9 £3.75

.....Bishop: *Physics - A Practical Approach* 0333 22593 7 £4.25

.....Slater and Thompson: *A Foundation Course in Chemistry* 0333 25515 1 £2.75

From:

Name

School

Address

..... Postcode

Send this form to:

Promotion Department, Macmillan Education,

FREEPOST, Basingstoke, Hants RG21 2BR

No stamp required

Allen & Unwin announce Practical Ecology Series

Series editor: Morton Jenkins

This is a new series of texts specifically written for practical ecology work in schools and colleges.

Each book examines a different habitat and each provides a complete package meeting the requirements of all 'A' level biology syllabi. The emphasis is on class practicals, both field and laboratory, that can realistically be carried out during a normal week's field course or over a period of more continuous courses. Questions are designed to test the student's understanding of the habitat's ecology. Each volume is self-contained, with detailed descriptions of methods and materials and, where identification is required, keys are provided.

Seashore Studies

Morton Jenkins

The seashore is a rich and complex ecosystem. Many of its ecological characteristics are accessible to simple investigation and it is a favourite habitat for teaching ecology. Morton Jenkins here deals with both rocky shores and sand and mud, using both field and simple laboratory studies, gives detailed methods for studying zonation and the effects of tide and waves, morphological and physiological adaptations, productivity, competition and community structure.

March 1983 104 pp Royal 8vo

0 04 574019 4 Paperback £2.10 net

Forthcoming:

Grassland Studies

Juliet Brodie

Autumn 1983 80 pp Royal 8vo

0 04 574020 5 Paperback £2.45 net

George Allen & Unwin (Publishers) Ltd

PO Box 18, Park Lane,

Hemel Hempstead, Herts, HP2 4TE.

Urban Ecology

Diane Smith

Most schools are in towns or cities, yet traditional field ecology is mainly concerned with rural or lightly managed ecosystems. There are, however, many varied micro-habitats in built-up areas, often subject to strong environmental pressures such as atmospheric and water pollution, frequent disturbance, trampling, nutrient or water scarcity, etc. Diane Smith uses such features as footpaths, walls, graveyards, gardens, compost heaps and derelict land to investigate the effects of these pressures and to demonstrate urban ecological properties of often isolated habitats.

July 1983 104 pp Royal 8vo

0 04 574018 6 Paperback £2

EXTRA

EXTRA

NOW AVAILABLE

ARNOLD-WHEATON

A complete course in human and social biology for pupils aged 13-16

FOCUS ON MAN
SYLVIA CHAPLIN

This new course book has clear, lively presentation, careful explanation of scientific terms and concepts, up-to-date information and data, excellent illustrations (including a FULL COLOUR section), and banks of basic project ideas and exercises.

£4.75

INTRODUCTION TO COMPUTER STUDIES
P CRADDOCK and A R HASKINS

Birmingham Educational Computing Centre

This superbly produced CSE text is bound to become one of the best appreciated course books at this level. Both authors are highly experienced computing teachers, and it shows — the material is up-to-date, clearly and interestingly described, very well illustrated and of a fully acceptable teacher level.

COMPUTERS IN SCHOOLS

0 08 025002 5

£3.50

Please send me inspection copies of
FOCUS ON MAN
INTRODUCTION TO COMPUTER STUDIES

0 08 024981 7

0 08 026002 6

BLOCK CAPITALS, PLEASE:

NAME:

SCHOOL:

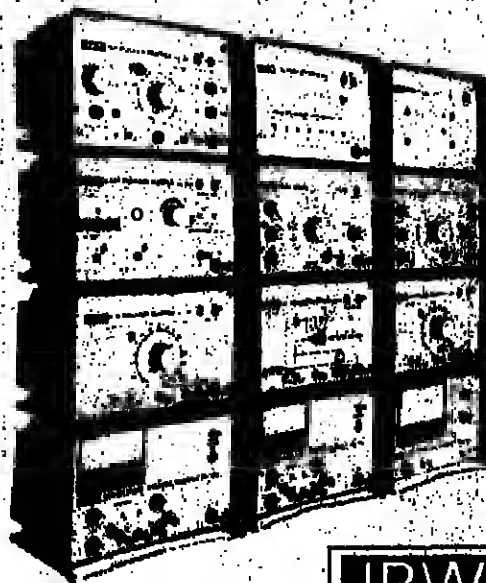
ADDRESS:

L.E.A.:

T18/2

Return this coupon to ARNOLD-WHEATON Inspection Copy Dept.,
3 St. Arnold & Son Limited, FREEPOST, Leeds LS11 9YU
(not valid for the UK)FOR ALL YOUR METERS
& POWER SUPPLY UNITSDigital and Analogue Meters for Class Demonstration
and Student use.

Send for our catalogue.

The Weir Electrical Instrument Company Limited,
Bradford-on-Avon, Wiltshire BA15 1BU, England.
Telephone: (02216) 2043. Telex: 449324.THE FIRST
PLACE TO LOOKL.V., H.T. and E.H.T. power supplies, stabilised
power supplies, signal generator and power amplifiers,
electronic galvanometers and L.V. transformers
form part of the range of Irwin equipment housed in
the new robust ABS polymer case.The features include neat cable housing, locking ribs
for stable stacking, an integral carrying handle and a
deep hood to protect the easy-to-understand control
panels. Some also have lift stands.For further details of our comprehensive range of
science teaching equipment, send for a free copy of
our 400 page science teaching catalogue.

IRWIN

IRWIN DESMAN LTD.
294 PURLEY WAY, CROYDON CR9 4OL
Telephone: 01 898 8441

Assets and liabilities

Sally Festing talks to three prominent women scientists

Women scientists working with colleagues of both sexes don't feel like "women scientists" any more than their male counterparts feel like "men scientists". But when they are isolated, their very conspicuousness confronts them; and by and large, science is male dominated, the more so, the higher up the ladder you go.

Thirty women Fellows of the Royal Society against 920 men is a provoking figure. Few women obtain medical consultancies and few hold science chairs. Of course today's professor level reflects the school system of 30 years ago. Still it remains a tantalizing topic. There's not a shred of evidence to suggest women's intellectual equipment is inferior, but could it be different? How can their positive strengths be tapped? Why is their contribution so unevenly spreading?

It was the dearth of promising successors that prompted Professor Daphne Jackson, the one and only woman professor of physics, to compare the number of girls taking postgraduate physics degrees with those in sociology and biochemistry. Surprisingly, a higher proportion of the former remain in the discipline after graduation. In other words, once in physics, the tendency is to stay; shortage of students must be accounted for much further down the line — in schools.

Girls number less than half the total taking O level physics and less than a third taking A level (London Board 1982). Although girls in mixed schools have a better chance of being offered physics at fourth and fifth level, the proportion choosing to study the subject is substantially higher in single sex schools; and with the best will in the world, as Jan Harding's *Horizon* programme showed, prejudices are reinforced unintentionally.

As the first capable physicist from Peterborough County Girls Grammar (which closed last year, for replacement with a coeducational comprehensive), Professor Jackson credits her school for the grooming and encouragement that enabled her to hold her own at Imperial College (75 girls in three thousand students). Since then, the assets and liabilities of being a woman have alternated. From rank of lecturer to head of department, her very uniqueness was probably an advantage.

At the same time she was helped in being promoted within Surrey University. To have been introduced to a position in authority elsewhere, would, she thinks, have been extremely difficult. Even now, a man with the same qualifications might expect extra-curricular appointments nearer the power sources of Whitehall.

Professor Jackson's department is a well trodden routine," she says. "You've got to know the rules of the game, but you make progress by having ideas, then you go back and fill in."

The trend for physics to be governed by money is reducing the opportunities to exercise this kind of individuality. Surrey University received painful cuts in 1981.

Though it must be a source of pride to have pioneered, in the end Professor Jackson ruefully notes that after 12 years, she remains such a rare bird.

"There's lots of fun in a mixed team, it's more complimentary. It's very sad to go to a standing conference of professors of physics — well, there's just me."

Professor Marian Hicks, head of the experimental pathology unit at Middlesex Hospital, is another woman in a man's world. As a child she wanted to study medicine but two brothers got in first and her father put his foot down at supporting a third. Physiology at University College took only 3 years, so she regretfully accepted the option. It was a mistake. Working, now, on the fringes of medicine, no one is more aware than she of the advantages of medical qualifications. "A bigger hurdle even than being a woman," she says.

highly research orientated. With forty per cent of its students at postgraduate level she has less formal teaching, though a considerable administrative load. She insists moreover, that she should be prepared to do anything she requires from her team. Outside committees are invaluable: it is part of Surrey's ethos to relate its academic work to life in general, and she is sure that attitudes she picks up on Health Service committees get fed back into research. But all this is time consuming, and a good deal of her own contribution is in theoretical physics in a mode outside office hours.

In physics, she says, one must be versatile. Her recent move into the more demanding, interdisciplinary field of medical physics has proved her point. One must be courageous, persevering, and prepared to take risks. Imagination and creativity also go high on her lists. "Girls have a picture of people in white coats, stuck away in a laboratory following

and thorough adaptation to work hours."

Despite Professor Hicks's modesty that equal rights mean equal opportunity, she feels impelled to be twenty per cent better than the men. The vigorous, 9-5 regulars have been tough and it has been competitive; a diet on which she thrives.

On the positive side, she thinks women are tolerant. It is difficult to separate nature from nurture, but in practice it means they are prepared to listen. Persistence and an indomitable resilience are also important. "People shouldn't take on too much personally or react over-emotionally to the rough and tumble of work," she says. A perk is simply that she enjoys men's company. Unfortunately, never; but she is prepared, on occasion demands, to consciously adopt men's techniques.

Little role-playing however, is called for in biology. Twice as many girls take O and A levels, a significantly higher proportion pass at A level and there are equal numbers applying for postgraduate posts. As the requirements then, differ from those of a chemist or physicist. Lifelong biologist, Dr. Ann McLaren sees the ability to organize as a great boon, and on the whole, women seem to be good at perhaps several jobs simultaneously, sorting out priorities. Family life might even be a good training. There have always been plenty of women bacteriologists making out their own schedules. Another apparent difference is that women find it easier to admit they don't understand. Apart from the direct advantage, what seem silly questions, may turn out interesting. Obsessionality, she puts before patience; though one must know when to cut losses and withdraw.

Dr McLaren retains an enthusiasm for laboratory work that neither dulls as head of the MRC Mammalian Development Unit at University College nor committees work is dimmed.

Professor Daphne Jackson

A well trodden routine," she says. "You've got to know the rules of the game, but you make progress by having ideas, then you go back and fill in."

The trend for physics to be governed by money is reducing the opportunities to exercise this kind of individuality. Surrey University received painful cuts in 1981.

Though it must be a source of pride to have pioneered, in the end Professor Jackson ruefully notes that after 12 years, she remains such a rare bird.

"There's lots of fun in a mixed team, it's more complimentary. It's very sad to go to a standing conference of professors of physics — well, there's just me."

Professor Marian Hicks, head of the experimental pathology unit at Middlesex Hospital, is another woman in a man's world. As a child she wanted to study medicine but two brothers got in first and her father put his foot down at supporting a third. Physiology at University College took only 3 years, so she regretfully accepted the option. It was a mistake. Working, now, on the fringes of medicine, no one is more aware than she of the advantages of medical qualifications. "A bigger hurdle even than being a woman," she says.

"If I stopped for 5 years I knew I would always go back in a subordinate role, listening to someone else's ideas instead of making my own." The alternative was 10 weeks off

Despite Professor Hicks's modesty that equal rights mean equal opportunity, she feels impelled to be twenty per cent better than the men. The vigorous, 9-5 regulars have been tough and it has been competitive; a diet on which she thrives.

On the positive side, she thinks women are tolerant. It is difficult to separate nature from nurture, but in practice it means they are prepared to listen. Persistence and an indomitable resilience are also important. "People shouldn't take on too much personally or react over-emotionally to the rough and tumble of work," she says. A perk is simply that she enjoys men's company. Unfortunately, never; but she is prepared, on occasion demands, to consciously adopt men's techniques.

Little role-playing however, is called for in biology. Twice as many girls take O and A levels, a significantly higher proportion pass at A level and there are equal numbers applying for postgraduate posts. As the requirements then, differ from those of a chemist or physicist. Lifelong biologist, Dr. Ann McLaren sees the ability to organize as a great boon, and on the whole, women seem to be good at perhaps several jobs simultaneously, sorting out priorities. Family life might even be a good training. There have always been plenty of women bacteriologists making out their own schedules. Another apparent difference is that women find it easier to admit they don't understand. Apart from the direct advantage, what seem silly questions, may turn out interesting. Obsessionality, she puts before patience; though one must know when to cut losses and withdraw.

Dr McLaren retains an enthusiasm for laboratory work that neither dulls as head of the MRC Mammalian Development Unit at University College nor committees work is dimmed.

Professor Daphne Jackson

A well trodden routine," she says. "You've got to know the rules of the game, but you make progress by having ideas, then you go back and fill in."

The trend for physics to be governed by money is reducing the opportunities to exercise this kind of individuality. Surrey University received painful cuts in 1981.

Though it must be a source of pride to have pioneered, in the end Professor Jackson ruefully notes that after 12 years, she remains such a rare bird.

"There's lots of fun in a mixed team, it's more complimentary. It's very sad to go to a standing conference of professors of physics — well, there's just me."

Professor Marian Hicks, head of the experimental pathology unit at Middlesex Hospital, is another woman in a man's world. As a child she wanted to study medicine but two brothers got in first and her father put his foot down at supporting a third. Physiology at University College took only 3 years, so she regretfully accepted the option. It was a mistake. Working, now, on the fringes of medicine, no one is more aware than she of the advantages of medical qualifications. "A bigger hurdle even than being a woman," she says.

"If I stopped for 5 years I knew I would always go back in a subordinate role, listening to someone else's ideas instead of making my own." The alternative was 10 weeks off

Professor Marian Hicks

If the great 'breakthrough' is relatively rare, a series of small discoveries maintain momentum and as long as research feels overwhelming, the scientist puts up with the routine. Perhaps naively, is a way of saying, maturity is a handicap; for the person who sees what he is doing in perspective may find the effort pointless. That individual scientists vary in talents and character is revealed by Derek Richter's *Women Scientists* (Methuen 1982). The qualities required in different branches of science also vary to some extent. In physics, the kinetic theory of gases, quantum mechanics and diffraction, and more complex electronics and nuclear physics. The earlier books dealt with some of these topics in a general, non-quantitative, way. Now

Book reviews

Life-cycle

The Human Body series Birth and Growth. £4.25. The Lungs and Breathing. £3.99. By Brian R Ward. Franklin Watts.

Most children will have seen videos, films and film loops on both these topics, and there are obvious advantages in having material of this kind presented in that way. However, there is no doubting the value of being able to work at one's own pace through the same material, if complete and lasting understanding is to be achieved. For this reason, these examples from the Human Body series are worth their place in any middle or secondary school library. Both have an excellent glossary and index.

Birth and Growth attempts the formidable task of presenting the complete human life-cycle, beginning with zygotes dealing with male and female anatomy and proceeding logically to menstruation and ovulation, fertilization, pregnancy, the development of the foetus and birth of the baby, growth through childhood into adolescence, maturity and old age. On the way there are excursions into the consideration of genetic inheritance, and the birth of twins. Illustrations are uniformly superb, though it is a pity that all the people shown are white-skinned.

I find it interesting that the book ends where it does. The last sentence, referring to "olderly people",

reads: "They can remain active and healthy, enjoying their retirement and freedom from responsibilities". Well, we hope so, but what comes next? I am not blaming Brian Ward for not including any reference to human death, especially in a book entitled *Birth and Growth*, but its absence does tend to reinforce the increasingly strong taboos in our culture about that significant part of the life cycle.In *The Lungs and Breathing*, Brian Ward wrestles, as must his readers, with complex and interrelated systems which cannot be oversimplified without distorting the facts. It is not possible to talk about the respiratory system without reference to the highly complex circulatory system. The use of large print does not make explanation easier, and while illustrations do help, especially if they are as good as these, the topic remains intractably difficult. Brian Ward makes a creditable attempt to overcome the problems of presenting such material to young readers, and he is notably successful in those sections of the book dealing with such topics as "Breathing Problems", "Aquatic Man", and "Breathing in High Altitudes". His treatment of the more mechanisms enables this fascinating area to become accessible, but for the more fundamental processes concerned with the structure and function of the lungs, nose and mouth, the interaction of lungs and heart, only the more persistent and determined students will be able to stay with it.

Philip Hytch

Less-able readers

Access to Science series. By Graham Mitchell and George Stamp. Introduction. Student's Book £1.60. 0 245 53665 5. Teacher's Notes £1.35. 53706 6. Classification, Student's Book £1.60. 53664 7. Teacher's Notes £1.35. 53705 8. Harp.

I am sure Harp's *Access to Science* will be welcomed by all those who in the past have been unable to find suitable science material pitched at the right level for their less-able readers, and who consequently have been forced to use the more demanding publications intended for the capable child — often with only limited success. The dearth of books for the remedial child outside maths and English is well-known to teachers and writers alike, and probably even more so to the school capitulation structure, where many heads of large departments control the purse-strings but rarely come across the clientele for whom Harp's series is intended. If no one buys, no one publishes.

Access to Science is a truly excellent series of books which will do much to alleviate the situation. All chapters vary in length. Four pages seems about average. Words of instruction to the pupils (action words) such as Copy, Cut, and Check are repeated in boldface throughout the series so that they will become familiar with use. A core vocabulary of necessary words (plus, context, mammal) is supplied at the head of each chapter for assimilation beforehand. My only gripe — a small one — is that there are sometimes too many of these for the pupil to learn, and the head of the remedial department might object to familiarizing someone else's group with them as suggested in the Teacher's Notes supplied with each pupil's book.

The series is suitable for children experiencing reading and comprehension difficulty in middle schools and the first three years of secondary education. It consists at present of *Measurement, Separating Substances, Water, Air, Classification and Reproduction*. I hope there will be more.

Bill Ridgway

Specifics

Understanding Physics Volume 3. By D R Harrison. Heinemann Educational £3.50. 0 435 67302 5.

Rounding off a short series of books on O level physics, *Understanding Physics Volume 3* contains "topics which are conceptually harder and better left until near the end of the course". The first two volumes dealt with the 'core material'; now come such specifics as motion in a circle, magnetism, the kinetic theory of gases, refraction and diffraction, and more complex electronics and nuclear physics. The earlier books dealt with some of these topics in a general, non-quantitative, way. Now

there is a little more mathematical expectation, and the work is advanced to examination levels.

It is worth recalling the technique of the sets of questions. After a relatively brief exposition of the theory, there come examples in four classifications. Exploratory, introductory questions use the information provided; others develop a theme in class discussion. A third set test application and understanding, and then there are some harder questions for those members of a class making faster progress.

Each chapter ends with a "summary of ideas, formulae and definitions" to aid reference and revision. Teachers who did not see copies of volumes 1 and 2 when they were commended in these pages last year might well rectify the omission now.

FWK

Practical aspects

Physics in Action. By Andrew Lambert. Blackie pupil's book £2.95. 0 216 91192 3. Teacher's Guide £1.75. 91193 1.

Two sturdy commonsense approach made by Mr Lambert is exemplified by a passage in the preface to the teacher's guide. "Nothing in this book is meant to imply that this is the only or the best way to carry out the task of showing 12 to 14-year-old pupils what physics is about. It happens to be one way that has worked in one set of circumstances."

Just so. However many times it has been said before, there is nothing lost by reiterating that the most effective textbook for any good teacher to use is one which he has written for himself, and with his particular classes in mind. Yet it must be recognized that not all

teachers (not even all good teachers) have the inclination, initiative or even the ability to prepare an acceptable textbook. They will prefer to seek something from a publisher's list and adapt it for their own specific purpose.

Again, Mr Lambert is realistic. He knows that those coping with this text of physics may be highly competent and experienced specialists. But they are very much more likely to come under the headings of inexperienced physics teachers, or teachers who are not physicists. It is with these latter groups in mind that he has prepared the guide to aid an understanding of the major aspects of the course, the point of some topics, and how they fit into a general physics education.

Mr Lambert covers typical work for the 12 to 14 age range, where a transition is being made from some form of integrated science to a study of separate sciences. His book "aims

to give pupils an understanding of the sort of questions that physicists try to answer, how they try to answer them, and what use physics has in the everyday world."

An emphasis on the impact of physics on the child's experience has, it may be presumed, conditioned the choice of topics covered. Thus electrical circuitry is introduced with consideration of railways, where power grids are all too evident, and the domestic iron, while optics involve the pinhole camera and the human eye.

Excellent illustrations, many in colour, again often relate matters that are meaningful to the child and thus grasp his or her attention. The use of photographs alongside diagrams is a further help to comprehension, while Mr Lambert justifies in practice his keenness on the relevance of applications of the subject.

He also stresses two other factors, that physics is not just a boy's subject but one that girls can do equally well, and that the practical aspects, the doing, are vital.

F W Kellaway

Alpha plus

The Natural History of Britain and Ireland. Edited by Heather Angel. Michael Joseph £12.50. 0 7181 1989 4.

Without reservation, this is a splendid work, alpha plus in every way. If a better single volume about this country's natural history has appeared in recent years, it has not come my way. Here a team of experts (with that much debated word for once correctly attributed) describe the landscape, the plant and animal life, and the very feel of the country. The whole is magnificently illustrated with hundreds of brilliant

photographs by Heather Angel, specially taken in the last year or so. In a foreword she writes cogently that "so varied are the islands geographically, seasonally and in the rapid alternation of weather patterns that if the same task was repeated... the pictorial representation would have quite a different flavour. The wealth of variety is a heritage and a responsibility."

The care of that heritage is a theme recurring in the various contributions. For instance, the establishment of hedges over many centuries has meant a habitat for many mammals, insects and birds. Now this is in danger of destruction by the "creation of large prime-lease fields". Other changes in land management (such as conifer plantations

replacing good hardwoods, or the indiscriminate use of chemical sprays), and the spread of housing, roads or airfields, are among the factors wrecking some of the quality of life in Britain.

Whether it is of life on the beaches or cliffs, or in lakes and rivers, on the uplands or even in the towns, this record is clear, efficiently comprehensive, and perceptively accurate. The names of those providing this record are noteworthy. Eric Duffoy, John Miles, M A Ogilvie, Eric Simms and W G Teagle are a strong collaboration; with Heather Angel's own writing and — especially — her illustrations, we have a work that appeals to eye and mind.

FWK

SCIENCE IN SOCIETY

A course for 16-18 on the implications of science, industry and technology for our society. Director John L. Lewis, Malvern College

NEW MATERIALS FOR 1983

JUST PUBLISHED



28 Audio Programmes

of 15 minutes each, designed to provoke discussion in the classroom.

- Unit 1 Health, Medicine and Drugs
- Unit 2 Food for a Growing Population
- Unit 3 Energy Today and in the Future
- Unit 4 Resources in a Finite World
- Unit 5 Science, Technology and People
- Unit 6 Industry
- Unit 7 Quality of Life and the Future

Contributors include:
Is medicine necessary?
DR JONATHAN MILLER and
DR ROGER NEIGHBOUR
Can we afford not to go nuclear?
SIR WALTER MARSHALL
Conservation of nature
HRH DUKE OF EDINBURGH
SIR PETER SCOTT
Is profit immoral?
LORD GODDMAN, DR F. E. JONES,
DR DONALD McDONALD
The Nuclear threat
SIR HERMAN BOND
PROFESSOR ADAM CURLE
Looking to the future
LORD KEARTON, SHIRLEY WILLIAMS,
KENNETH DADZIE
The Series chairman is Paddy Fahey

Each unit comprises four programmes on 2
cassettes, boxed and accompanied by a set
of Teacher's Notes £8.80 + VAT (£1.29)For further information about Science in
Society, a copy of our new brochures on the
course or inspection copies, please contact:HEINEMANN EDUCATIONAL BOOKS
22 Bedford Square, London WC1B 3BR

4 New Readers

on engineering in its many aspects and on
defence and energy issues.

- M Engineering 1
- N Engineering 2
- O Engineering 3
- P Defence and Energy Issues

Contributors include:
The role of engineering in our society
SIR PETER GAREY
The challenge of microelectronics
SIR ROBERT CLAYTON
Space vehicles
G. K. C. PARDOE
Gas and the gas industry
SIR DENIS ROOKE
The importance of defence
SIR HERMAN BOND
Do nuclear weapons protect us more
than they impair us?
ADAM CURLE

New Omnibus Pack M-P one copy of each
reader £4.00
Readers supplies in 5 copies of one
title £5.00

ARNOLD WHEATON

Science for infants and lower juniors

Read and Do

More titles in preparation

DOUG KINCAID and PETER COLES

A series of superbly produced books to introduce young children to scientific observation through the use of their senses.

- Reading level carefully controlled
- Illustrated with FULL COLOUR photographs
- All materials needed readily available
- Important foundation for future science learning

Titles already published:

- | | |
|---|--------------|
| <input type="checkbox"/> TOUCH AND FEEL | 008-026408-5 |
| <input type="checkbox"/> EARS AND HEARING | 008-026409-3 |
| <input type="checkbox"/> TASTE AND SMELL | 008-026410-7 |
| <input type="checkbox"/> EYES AND LOOKING | 008-026411-5 |
| Each book £1.10 | |
| <input type="checkbox"/> READ AND DO SET (one each of the above 4 titles) | 008-027879-5 |
| £4.20 | |

In preparation for publication in late 1983:

- ☐ HOT AND COLD
- ☐ LIGHT AND DARK
- ☐ QUIET AND LOUD
- ☐ WET AND DRY

Teachers:

For inspection copies, please tick the titles you wish to see, complete this address panel below and return the complete advertisement to: ARNOLD WHEATON, Inspection Copy Dept, E J Arnold & Son Ltd, FREEPOST, Leeds LS11 9YJ (no stamp needed in the UK)

Please send me inspection copies of the titles I have ticked.

NAME:

SCHOOL:

ADDRESS:

L.E.A.:

7/18/83



SCHOOL LIBRARY ASSOCIATION

LIFE IN YOUR LIBRARY

Books on BIOLOGY, PLANTS and ANIMALS for all ages; a classified list, with brief comments, of books reviewed in THE SCHOOL LIBRARIAN 1980-82. A handy guide to selection post free £1

Also (recent): THE WORLD IN YOUR LIBRARY Books on GEOGRAPHY and kindred subjects: a classified list of reviews in THE SCHOOL LIBRARIAN 1979-81 post free £1

The two lists together: post free £1.50

N.B. - THE SCHOOL LIBRARIAN (quarterly) offers over 500 reviews annually (fiction and non-fiction, all ages): important reading for subject teachers as well as librarians.

Recently published: CHILDREN'S WRITERS post free £2.25 Studies of seven contemporary writers for children, reprinted (with up-dated bibliographies) from THE SCHOOL LIBRARIAN.

Victoria House, 29-31 George Street, Oxford OX1 2AY

EQUIPMENT REPAIR AND SERVICE

Control Systems Services

Specialist in the repair of education science equipment will

REPAIR, RECALIBRATE and REFURBISH

Your equipment
So that it looks and acts like

NEW

Contact: Control Systems Services

231 Manningham Lane, Bradford BD8 7HH

Telephone: Bradford (0274) 491371

Approved Service Centre for many Local Authorities

EXTRA

For the safety of all

By Linda Kelly

Safety regulations nowadays are very stringent, some would say too stringent. Unfortunately, many teachers, especially in the physical sciences, where safety might be paramount, do not follow the regulations as laid down. Many, in fact, are not even aware of the laws relating to safety and safe practice and often the design of their laboratories and the equipment provided are inadequate, something they can do little about.

Even more alarming is the fact that many teachers, especially newly-qualified ones, are not aware that should an accident occur because of lack of proper facilities in their laboratories, they themselves are just as liable under law for allowing experiments to proceed in unsafe conditions, as is the authority for not providing proper facilities.

Thus, a teacher (or technician, as it applies to them too), who has been pointing out dangers to the authorities and campaigning for improvements, could still be sued or charged for contributory negligence, and could lose the chance of compensation for personal injury for the same reason.

Most common infringements of the rules involve the storage of chemicals. Many schools do not have adequate chemical storage facilities and storage of the smaller amounts is often in the teaching laboratory, or in the technician's prep room. Storage in laboratories should be seen as an obvious hazard, as however good, and well behaved classes are in general, there will always be someone who "larks about".

Storage in a prep room may not seem such an obvious hazard, after all that is where the technician will be using them. But there are many insidious dangers in this practice, as more often than not the technician spends the majority of her or his time there, and many fumes or dusts, though not immediately or in small quantities, dangerous, can affect a build-up over time, seriously affect their health.

Another big worry is that technicians are often not trained or qualified and are not aware unless told, how dangerous some chemicals, even fairly common ones, are. Those who, by experience or training, do know the dangers, and point them out are very seldom heeded, and can even find themselves labelled as scaremongers or troublemakers. After all, technicians are cheap, their wages are nearly always extremely low, and they are easily replaced by untrained, inexperienced people.

Storage of bulk stocks is even more worrying, as this is often in prep rooms or an inside room with



It is against the regulations to send animals home with pupils in the holidays

no special fire precautions or extractor fans, and often far more than the recommended permitted amounts are kept. This is another area where there is a distinct lack of knowledge. Many schools, dare one say most schools, have no idea of the maximum permitted amounts, especially of inflammables, and frequently stock two or even up to five times that mentioned in the regulations.

All inflammables and those liquid chemicals which have noxious or unpleasant fumes, should be stored in a locked metal cupboard open to air, with at least one hour's fire resistance, ie the cupboard should have a strong lock and be kept outside the laboratory building. This goes for storing acids and alkalis too.

Another danger to pupils and especially to technicians is the lack of adequate fume cupboard (lack of sufficient numbers not particularly design), which frequently forces dilutions and experiments to be carried out on open benches, where fumes and dusts are inhaled by the operator.

Laboratories usually have only one or two fume cupboards, some indeed, especially biological ones, having none. One or two fume cupboards is not enough for a whole class, and prep rooms very rarely have any fume cupboards at all. This means that when making up solutions the technician has to wait until a laboratory is empty and use a fume cupboard there, thus having to carry everything in and out or put up with the fumes in their prep room, usually unprovided with fume masks, or extractor fans.

Another aspect of safety regarding fumes is the danger of fire, explosive and spontaneous ignition, some chemicals can do this when they reach certain often fairly low temperatures, and the placing of heaters and radiators should be very carefully considered. There is also the frightening chance of ignition when two or more gases mix.

Often inadequate and sometimes non-existent fire fighting equipment

Mixing and matching

Science and the sixth-form college - the problems of transfer by Chris and Pat Mason

Despite a general contraction in education, sixth form colleges have proliferated and grown steadily in size over the past 10 years. The reasons are not hard to find. They offer a solution to the problem of small sixth forms which are a constant nuisance to the school, and the smaller comprehensive schools, and are therefore attractive on economic, social and perhaps even political grounds.

Staff in colleges are enthusiastic advocates of the system, being con-



vinced that it bridges the gap between school and work or higher education, allowing students to develop in a more adult and yet supportive environment.

The sixth form college appears to have been somewhat neglected by educationalists and even by journalists, except perhaps to note their impressive results in public examinations. Yet they are a new breed among educational establishments, facing a novel set of problems and a century of the rapid changes in society for the 16-18 age group: unemployment, YTS, CEE, "Basis for Choice", the "New Sixth-Former", etc. Each institution is attempting to come to terms with these problems and to produce solutions.

Perhaps the greatest difficulty in planning is matching the resources of the college to the needs of the students when they arrive in September. Students are interviewed prior to admissions, offered places irrespective of results, and indicate the course they would like to follow.

Many students make multiple applications, come to college, and then the "drop-out" rate can be high. Furthermore, substantial numbers fail to achieve the necessary grades and have to opt for alternative (usually lower level) courses. Sixty applicants for an A level course could produce 25 to 30 students in September, and the college must be able to accommodate either scenario.

There is no clear pattern, but, with experience, reasonable estimates and strategies to meet all contingencies can be made. For sub-A level courses, the numbers of students depends greatly on outside factors, such as the employment situation, and this year, the effect of the Youth Training Scheme, so predictions are difficult. If there were an unexpected increase in the number of students at the start of the year, the colleges would not necessarily be able to gain extra staff.

For students in an all-through school, choosing A levels is relatively straightforward, often being no more than a natural continuation. At a college, the process is more involved. This has the advantage that students are forced to seriously assess their future. They are encouraged to attend an open day, being able to discuss subjects with college staff, and to gain first-hand impres-

sion from current students. Having discussed choices with staff and careers teachers at school, students complete the college application form. References are sent to the college, the majority being very thoroughly produced, but some contain only a few generalized comments with little specific reference from subject staff on suitability for the course, or the soundness of the subject grouping.

Students, very often with their parents, are interviewed at the college by a senior member of staff, who may have little scientific background. Heads of science departments need to brief the interviewers on the importance of sensible groupings of science subjects at A and O levels, thereby producing a mutually supportive combination and keeping as many options open as possible. A course such as A level biology, physics and art can still occur, but students would be asked to reconsider their choice in view of the limited numbers of options for the future that this can give.

Many local schools set a limit of two sciences at O/CSE level, so that a crucial decision has to be made at 13, a difficult choice for the future scientist, especially one with biological leanings. Colleges may try to assist their school colleagues by offering guidance to pupils (and staff) at this crucial time. The general guideline is that chemistry is the least "good" first choice, but is probably the best "second" science choice. The college must be prepared to take these students for three A levels, even if they have not, because of the policy of their school, taken the subject at O level.

Potential graduate biologists and chemists, etc, face the most difficult choice of A levels. Chemistry is essential, but should they take maths or physics? The situation is complicated by the policy of some colleges that A level physics must take a one year maths course (A/O level) perhaps, so that they (effectively) take four A levels for the first year.

A better option is to run a maths course geared to the needs of physics, even though this may pose staffing difficulties. The problem of which A levels to take would be solved if physical science A level were offered, allowing the combination of Maths, physical science and biology, but it is difficult to find one teacher capable of covering the entire syllabus, and splitting a genuinely integrated course is undesirable. Lack of enthusiasm by HE makes colleges reluctant to embark on this scheme, but the case for a resurgence of this option is increasing as many schools are moving towards physical science, and biological science at O levels.

Sixth form colleges are sufficiently large to offer a range of alternative A levels - geology, computer science, electronic systems, for example and this makes the choice considerably more difficult. Senior staff find it difficult to persuade the "computer enthusiasts" that double maths and physics A levels is a sounder, more open-ended option than maths, electronic systems and computer science.

Many students are unable to reduce their choice to three A level subjects, and they may be encouraged to start four allowing them to make an informed choice by dropping one at a later stage. This can be a useful ploy for students who have not been "turned off" a subject at their previous school and are reluctant to make a total commitment even though it should be taken. Starting four A levels can resolve the dilemma in such a way that the student is not disadvantaged.

Another problem for the sixth form colleges is the heterogeneous nature of the teaching entry requirement of four O levels for A level courses, but a teaching group

may have a very mixed background, from four grade C/O levels up to 11 grade A's; some will have followed CSE courses, others will not have studied the subject for two years. Over half a set may have come from independent schools, so that six or so examining boards may have been followed from traditional to Nutfield. Staff keep close liaison with local state schools, so that the problems are reduced, but there is still a vast range of backgrounds, some students having virtually no practical experience, and few areas of the syllabus can be guaranteed to have been covered. Until a common core is agreed, this problem will persist.

Staff need sensitivity, skill and experience to tackle this diversity, a totally new situation for some staff whose previous experience was often limited to an all-through grammar school. Treading a middle path between a too simplistic approach, assuming no prior knowledge, with the danger of being dull and tedious, or a too advanced approach, with too many assumptions, and consequent loss of confidence of the students is difficult even for talented staff.

In the view of the variety of previous teaching styles, from pure dictation upwards, the integration of a study skills course within the subject is highly desirable, so that all students develop skills of revision, note taking, essay writing, etc, leading to a more enlightened individualized style of learning, making use of a wide variety of teaching methods (CAL, tape, slide, etc)

thereby standing students in good stead for HE. However, it is not sufficient to run a course at the start of the year. The idea of study skills must be followed-up, utilized, and built-on throughout the course.

There is need for improvement in this area, particularly a need for a greater awareness of what other tutor groups are attempting, so that a coherent pattern is apparent to the students. Indeed, we would argue that study skills should be an integral part of college policy. When colleges were set up, extensive in-service training courses were held, but other pressures prevent extensive subsequent training. Few new staff have received specific training from Education Institutions, so that a thorough induction programme is needed. Some LEAs organize in-service training days where staff from different colleges can meet on an academic or pastoral basis.

Sixth form colleges are still "feeling their way", responding to the demands imposed on them by society. A current problem is to provide a course for non-13 level students. CEE courses were aimed at the right level, but are becoming less attractive because of the lack of national validation. An increasing viable alternative is the City and Guilds course Scheme 365 - "Course in Vocational Preparation", which many science departments will have input into. Colleges are running it for the first time next year, and it will be some time for the "teaching problems" to be overcome.

Staff in sixth form colleges are often considered to have a soft option, but there is no doubt that the constantly changing sixth form courses, the large sets (some A level sets having, of necessity, over 20), the short time of the course (O level syllabuses have to be completed in 2 1/2 terms) with students having a very wide range of ability and background,



pose particular problems for the tutors.

These may be compounded as they usually coincide with an often quite difficult period of adjustment for the students, especially those from boarding schools, grammar or some comprehensive schools. To deal with this, a strong pastoral system is essential and it is vital that all staff are sensitive to the students' need to adjust quickly, so that the transfer to the more liberal, more self-disciplined atmosphere is accomplished easily.

Certainly, the first few weeks are crucial; staff need to maintain interest and confidence, building a solid foundation on the natural curiosity and enthusiasm of the students for science. It presents a challenge, but, if solved, is extremely satisfying and rewarding for both students and staff.

Dr Chris Mason is a senior tutor at Strode's College, Stroud, having responsibility for admissions, etc as well as teaching in the Science Department. Dr Pat Mason has taught chemistry at Strode's.

abal

THE ADVANCED BIOLOGY ALTERNATIVE LEARNING PROJECT

Project Team directed by D. P. Marshall (ILEA Inspectorate)

This dynamic new course for the changing sixth form consists of ten units which adopt a guided approach to learning and include a variety of media. The contents of the units were planned after carefully surveying all the A-level Biology syllabuses, taking into account current developments. Major features of the course include practicals integrated within the text, summary exercises, student objectives, self tests based on these objectives, post test for each unit and core and extension work.

Unit 1 (Introductory unit)

Units 2-5

Teacher's Guide for Units 1-5

Out this Spring

Units 6-10 in preparation

Cambridge Social Biology Topics

Series Editors: Dr. S. Tyrell Smith and Alan Cornwell

This is the first series to offer clear and concise coverage of the main aspects of the various social biology and related syllabuses. It provides a stimulating introduction to this subject of growing importance.

Out this Spring:

Individuals and Populations by Philip Gadd

Men and the Environment by Alan Cornwell

In preparation:

The Origin of Menkind by Stephen Tomkila

The Food Resources of Man by David Millerchop

Each book about £2.50

Physics

Questions for Assessment at 16+

Stephen Foster

This book will be most useful for the pupil who is aiming at CSE but will also provide valuable revision material for those studying the subject at O-level. Questions are of the type normally found on 16+ examination papers and include multiple choice, short answer and long answer questions. £1.25

Common Core Advanced Level Physics Multiple Choice Questions

Test Development and Research Unit

This book is intended for students preparing for advanced level physics examinations, particularly those where multiple choice questions form an important part of the assessment process. All the questions have been subject to a rigorous testing programme and have subsequently appeared in public examination papers. £1.95

Inspection copies for teachers are available from Rosalind Horton at the address below.

CAMBRIDGE UNIVERSITY PRESS

The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU, England

For Africa

Basic Secondary Science. By B Nicholl and A H Sloss. Student's Book 1. £2.63. 0 237 50527 4. Teacher's Book 1. £5.80. 50529 0. Evans.

Basic Science is a highly structured, fully integrated science course, following the philosophy that education is learning to learn, learning to live and learning to work. It is an adaptation of a well tested American integrated science course, modified to satisfy the needs of the new Nigerian curriculum. For each year there is a large student's book, 250 A4 pages; a similar size teacher's

book and a project book. UK pupils of the same age would be familiar with the topics covered: measurement, classification, forces, energy, air, water, characteristics of living organisms. The print is large, the language is simple and straightforward and the layout is good, giving little impression of overcrowding so common in UK books. There are many excellent diagrams in black and red, and numerous photographs. Practical are fully described and relevant background information is given, although some of the ideas appear a little demanding for this age group.

The book gives an impression of serious honest earnest endeavour rather than of genuine excitement, but in the hands of a good teacher it could provide the basis of an excellent course.

The style is clearly geared specifically for the West African market, with household filtration equipment described, the biological keys relate to birds and insects indigenous to Nigeria. These volumes are therefore a most impressive contribution to education in Nigeria.

Chris and Pat Mason

GROW WILD FLOWERS

in your school

for more information

CONTACT

Wild Things

Farn View Owlsmoor Road

Owlsmoor Camberley Surrey

Concrete evidence

Science and technology in a rural primary school described by Eileen Chadwick

My task as a peripatetic teacher visiting a group of small rural primary schools joined together in a federation, is to enrich the curriculum. Smaller schools are believed to be vulnerable to a narrower curriculum than thought desirable because the pool of specialist knowledge available to larger schools is denied them. My work is mainly devoted to the teaching of science and the propagation of ideas. Recently, a new and fascinating dimension has been added to my science teaching - that of technology.

Some teachers may feel that primary technology is yet another bandwagon and that good primary science has always included a technological awareness. The technological approach as I now know it is different. It is a particularly exciting innovation for primary schools since it is a strategy for problem solving which has an inbuilt formula which enables teachers to structure the curriculum and yet allow for plenty of open ended thinking. This has not always been easy to attain at any level of science teaching yet this approach takes care of this problem very neatly. The project described here is but one example of the use of this strategy. In this case, concrete was the medium we worked with.

Don Cressy, of the Cement and Concrete Association's Training Division and I worked with four year primary children from St Mark's C of E Primary School, Cold Ash, near Newbury. Their initial objective was simply to make something in concrete. The children were given the initiative from the very beginning. I had briefed them on the project but they were to make their own decisions.

What is the need? what are the problems? how can we solve the problems? final design and making something and testing the finished article(s). The overview gave them an introduction to the order in which they might proceed (this need not be linear).

The children first of all thought of articles they would like to make. At



this stage I introduced them to brainstorming, a technique for stimulating divergent thinking. Wild and impractical ideas were encouraged but in the end they settled upon a concrete chessboard and sets.

The children were never given a recipe to follow but solved the problems as they went along, although the Cement and Concrete Association's Training Division gave us plenty of written material to start with as well as putting expert advice and practical help at our disposal when it was required. We are indebted to Don Cressy for his enthusiasm, guidance and aid. The children couldn't wait to come to grips with their building medium and we found the CCA's work cards covering simple experiments on topics such as different mixes of concrete, reinforcement, drying conditions as well as force effects on

concrete, absolutely fascinating and easy to follow.

Children with different past experiences and abilities all gained at their own level. For some the practical weighing of the same mass of cement, sand and gravel and observing differences in volume was illuminating. Others, at a more advanced stage of thinking, constantly offered hypotheses they wanted to test by further experiment. The children were obviously very stimulated and a whole term's work could have stemmed from this aspect alone.

Once the children had solved the basic problems of using concrete as a material, they began to think out the design of the end project. By now they had naturally formed themselves into working groups. One group determined the best height for the table and seats by designing and carrying out an experiment to discover the height at which children of different ages felt most comfortable when sitting.

Another group calculated the area and volume of the table top, produced an accurate life size drawing showing exact positions of white and black squares and borders and then nailed together the mould using old pieces of wood.

A third group came up with the idea of making open topped triangular boxes for the table and seats. Others worked on the design, mixes and moulds for chess pieces whilst yet another entrepreneurial group begged a wide cylindrical cardboard container from the head teacher to form the mould for the table support.

Innumerable other problems arose and were solved - how to compact the concrete; how to reinforce it; how to mark the chess squares; transporting the final items; etc. The finished project, presented delightfully by the children as their leaving present to the school, now stands proudly in the grounds. The proof of the pudding is in the eating though. One weekend Mrs Davies, the head teacher, noticed some workmen sitting around the table using stones and twigs for their game of draughts!

Eileen Chadwick is a peripatetic teacher working in the Kennel and Theale Federation of small schools in West Berkshire. Other teachers wishing to undertake projects using concrete can obtain work cards, suitable for upper juniors and lower secondary children, as well as other written material, expert advice and films from the Cement and Concrete Association, Conference and Training Centre, Palmer's Green, Fulmer, Bucks HP8 9NS.

"Starting from a walk"

Report by Gillian Thomas

The green fields of Northamptonshire are dramatically different from the Sahara, but what common approach could children apply to the study of them? This challenge was put to Ron Wilson, head of Everdon Field Centre in Northamptonshire, by the World-wide Education Service for its environmental science course.

An educational charity, the WES is part of the Parents' National Educational Union and provides teaching material for British children living abroad, either for use at home or in the schools it has set up in British communities.

Given this wide brief, Mr Wilson has created "Starting from a Walk". It is an A4 loose-leaf folder with notes on what to do during a walk together with a series of assignments for children to carry out afterwards. These are simple experiments like recording cloud cover, germinating seeds and testing the senses, all aimed at fostering an understanding of the environment.

Although the material was designed primarily for the WES's own purposes, it has decided, for the first time, to sell it as well for use by non-specialist primary teachers teaching science.

In using a walk as his starting point, Mr Wilson deliberately drew inspiration from Charlotte Meson, whose radical ideas on teaching during the last century led to the PNEU's formation.

A strong believer in the value of environmental studies, regular nature walks were a feature of her teaching methods. So, working with the WES team involved in curriculum development, it seemed to Mr Wilson both timely and practical to exploit her concepts.

Whatever the surroundings - town, country or even the Sahara - he recommends a weekly outing as the basis for some form of scientific study. On a circular chart he poses questions on what the child might look out for each time, such as the animals, plants and weather and also how a person's own five senses are used.

"The material had to be relevant world-wide, so I chose the body as a central resource since it is the only constant feature on every walk, whatever the surroundings," he explains.

Notes on the basic techniques of information gathering and keeping are followed by assignments as a means of extending the information culled during the walk. They are in no particular order, but the aim is to provide children with simple experiments related to the home which will have enough to keep them going for about two years.

The projects, which are extremely varied, can be carried out at different levels, depending on the child's age, ability and interests and are designed to be adaptable to any environment. Significantly, nearly half the projects involve the use of the senses, like height and weight, measuring reaction times, experiments with colour, testing smells or comparing textures. Many introduce basic scientific techniques such as using a stopwatch, keeping accurate records and examining leaf litter.

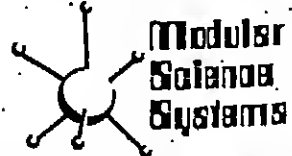
Each sheet is presented in a simple, easy-to-use format, with a large, easily removed section for the child's use. There is a clear list of "ingredients" the majority of which are readily to hand but a few specialist items are included such as a hand lens, sand paper and a magnifying glass. The projects are designed to be carried out at different levels, depending on the child's age, ability and interests and are designed to be adaptable to any environment.

"I purposely do not link the results of experiments as this would defeat the 'discovery' approach," points out Mr Wilson. "The aim is to encourage both the child and teacher to look critically at what they have been doing together."

As a compact source of scientific topics, the folder is a valuable class resource as well as a home resource. Moreover, being a book, it should make every walk more interesting whether a walk to school or just to post a letter.

Starting from a Walk, published by the World-Wide Education Service, Strete House, 44-50 St. Street, London NW1 7NW, is available for £2.50 (plus postage).

Computer Assisted Problem Solving in Science



C.A.R.M.

Computer Assisted Resource Management packages which:

- are realistic and relevant
- assist examination and assessment
- produce individualized resources
- function simply and flexibly
- include comprehensive teachers guides

Modules currently available cover G.C.E. C.S.E. 16 plus and include:-

- "What happens when the oil runs out?"
- "How can we reduce the world food shortage?"
- "How did early chemists predict unknown elements?"

and Pupil-profile record management & report writing

Write for a free brochure to: MODULAR SCIENCE SYSTEMS, Cleveland Studios, Zeland Road, Loftus, Cleveland. Tel: 0947 600830

PRIMARY EDUCATION

continued

HAMPSHIRE
ST. MARK'S C.E. (AIDED) PRIMARY SCHOOL, Hants. Tel: 01494 211111. April 1983. 25 pupils. 11-12 year olds. Candidates for infant class. To Head for details. (15759)

LEICESTERSHIRE

HOLY CROSS R.C. PRIMARY SCHOOL, Leicester. Tel: 0533 211111. Scales 2/3. Required August. Applications for September. Further details available from the Head (1581).

TAMESIDE
NETROROUGH
LYNCHURST COUNTY
ASSISTANT TEACHER
Scale 3. Applications are invited from suitably qualified and experienced teachers for the post of Assistant Teacher. Further details available from the Head (1581).

LEICESTER
ST. MARK'S R.C. SCHOOL, Leicester. Tel: 0533 211111. Scales 2/3. Required August. Applications for September. Further details available from the Head (1581).

WIRRAL

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

MINISTRY OF DEFENCE

SERVICE CHILDREN'S
EDUCATION AUTHORITY
Scale 1. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

BRENT
(LONDON BOROUGH OF)
WILKIN MANOR INFANT
SCHOOL, Brent. Tel: 0181 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

NEWHAM

(LONDON BOROUGH OF)
WILKIN MANOR INFANT
SCHOOL, Newham. Tel: 0181 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

WALTHAM FOREST

(LONDON BOROUGH OF)
WILKIN MANOR INFANT
SCHOOL, Waltham Forest. Tel: 0181 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

CUMBRIA

COUNTY COUNCIL
SCHOOL, Cumbria. Tel: 01524 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:


WIRRAL
METROPOLITAN
SANDBROOK PRIMARY
SCHOOL, Wirral. Tel: 051 511111. Group C - 250 on roll. Required for September. Applications for September. Further details available from the Head (1581).

Scale 1 Posts:

63

Lancashire

County Council



The following are required for the dates stated, and the closing date is 31st March, 1983.

Secondary Schools
Farms/further details from a Headteacher at the school.
S.A.E. please.

LEYLAND WELLFIELD HIGH
Yewlands Drive, Leyland, Preston (880 en Roll)
As soon as possible
SCALE 3 - ENGLISH

MORECAMBE & HEYSHAM, MORECAMBE HIGH
Dellam Avenue, Morecambe (Mixed Comp. 1,485 on Roll;
220 in 6th Form)
1st September 1983
SCALE 2 - FRENCH

**RAWTENSTALL ALDER GRANGE COUNTY
SECONDARY**
Grange Road, Rewinstall, Roseandsale (365 on Roll)
1st September 1983

**SCALE 2 - MATHEMATICS, RESPONSIBLE FOR CSE
AND SLOWER LEARNING CHILDREN**

Re-advertisement

LANCASTER GIRLS' GRAMMAR
Regent Street, Lancaster (943 on Roll)
1st September 1983

**SCALE 1 - NEEDLEWORK AND HOME ECONOMICS
TO 'O' AND 'A' LEVEL**

FLEETWOOD HESKETH HIGH
Beach Road, Fleetwood (1,367 on Roll; Inc. 203 in 6th
Form)
1st September 1983

**SCALE 1 - MATHEMATICS - ABILITY TO TEACH 'A'
LEVEL AND ADVANCED TECHNOLOGY**

BLACKPOOL COLLEGIATE HIGH
Blackpool Old Road, Blackpool (11-18 Mixed, 1,250
pupils 11-18; 690 in Sixth Form)
1st May 1983 or as soon as possible thereafter
SCALE 1 - REMEDIAL SUBJECTS

BLACKPOOL WARBRECK HIGH
Warbreck Hill Road, Blackpool (11-15; 988 Boys)
1st September 1983 or earlier if possible
SCALE 1 - GEOGRAPHY TO CSE AND GCE O'

LYTHAM ST. ANNES COUNTY HIGH
Worsley Road, Ansdell, Lytham St. Annes (1,420 on Roll;
11-18)
1st September 1983 or earlier, if possible
SCALE 1 - GEOGRAPHY

FULWOOD COUNTY HIGH
Black Bull Lane, Fulwood, Preston (1,008 on Roll)
1st September 1983
**SCALE 1 - BIOLOGY AND GENERAL SCIENCE,
ABILITY TO OFFER CHEMISTRY OR PHYSICS**

1. LEYLAND ST. MARY'S RC HIGH (Special Agreement)
Royal Avenue, Leyland, Preston (926 on Roll)
1st May 1983

SCALE 1 - CONTROL TECHNOLOGY

WALTON LE DALE BROWNE DGE ST. MARY'S RC HIGH (Special Agreement)
Station Road, Bamber Bridge, Preston (924 on Roll)
As soon as possible

SCALE 1 - BOYS' PE

SKELMERDALE TAWD VALE HIGH
Glenrath Road, Skelmersdale (860 on Roll; Mixed)
1st May 1983, or as soon as possible

SCALE 1 - ENGLISH (TWO POSTS), FOR ONE POST FRENCH AS SECOND SUBJECT ADVANTAGE

TARLETON COUNTY HIGH
Heaketh Lane, Tarleton, Nr Preston (800 on Roll)

SCALE 1—HOME ECONOMICS

BLACKBURN PLECKGATE HIGH
Pleckgate Road, Blackburn (1,303 on Roll; Mixed 11-15)
1st May 1983, or as soon as possible thereafter

**SCALE 1—TO WORK IN A DESIGN/CRAFT AREA,
TEXTILE MATERIALS AND NEEDLEWORK WITH
INTEREST IN HOME ECONOMICS**

DARWEN MOORLAND HIGH
Holden Fold, Darwen (1,166 on Roll; Mixed 11-18)
1st September 1983, or earlier if possible

SCALE 1—GIRLS' PHYSICAL EDUCATION

BURNLEY TOWNLEY HIGH
Townley Holmes, Burnley (1,143 on Roll; Co-ed 11-16)
1st May 1983, or as soon as possible thereafter

SCALE 1—MUSIC

BACUP AND RAWTENSTALL GRAMMAR
Glen Road, Waterfoot, Rossendale (830 on Roll; 205 6th)

**SCALE 1—HISTORY TO 'A' LEVEL, ABILITY TO
OFFER JUNIOR ENTRY (PREFERABLY TO 'O'
LEVEL) ADVANTAGE.**

Lancashire County Council is an Equal Opportunities employer.

LONDON
LECTURE IN
PSYCHOLOGY
TITLED "THE
SPECIAL NEEDS
OF THE CHILD
IN THE LONDON
INSTITUTE
UNDER THE
MONTA". 157655

STERN,
Yakovlev, N.
Acquired at North
Harvard Primary T
Rudolf Steiner E
Educational space
to be used by a
person appointed
responsible for the
English and Span
Classroom around
6 - 12 years old
language support b
dress on an individ
required. Some
children will be
will not be nec
in. A teacher h
combines a thoro
clinical compet
German speak
advanced child
Apprentices
the Principal,
column vline. 135

**NOTTINGHAM
COUNTY C.**
TEMPORARY
Grade 1 Clerk
(pay award)
HEATING
Required
May, 1985.
For full en-
quiry details
Further Education
Climax date
1985. (756311)

Further Earn
Closing date
1993. (576311)

ROTH
METHUEN
COUNTY
ABREY
It is requested
Term 1983.
TEACHER
S.E.A.
An Assistant
Principal
Ordained April
1981. He is
teaching first
grade.

Closing
March, 1963.

Curriculum
details of two
presented by
Furner of the
the Common L
worth, W. H.
2RA, W. H. M
tor of
sources, 1658

ROTH
METRO
CO

Required
ppstuln.

TEACHER
KEYTEBS
OBSERVATI
ASSESSMEN

The Cent
of a Bas
children of
to adv 17
provision f
ment.

Children
tion. The
range of
attainment and
cultural
perspn. appo
vide and imp

to the annual
to the preparatory
national association
and attend the
Conference
meetings may.

Previous years
similar Unit
advantageous
functions for
the year, at
data are included.

Closing
March, 1953.

Curriculum
desires of two
reference to
of Educational

PLEASE SCHOOL
 xlease House, Clay H
 dhurst (Tel. 3633)
 Hampshire
 tured for the following appoint
 dent Residentiat Special So

Education and care of 32
aged boys. The appointme
and are non-resident.
Teacher to teach this subject
C.S.E. standard together
ng.
alist to plan and implement
work in literacy and numer
topics teaching.
ies and outdoor pursuits v
of each appointment.

Scale 1 or 2 depending on
various duties of 15 hours per
the appropriate allowance will
als for application form and fu

EDINBURGH DUNFERMLINE COLLEGE OF PHYSICAL EDUCATION

POST OF VICE PRINCIPAL

Applications are invited for the above post which will become vacant on 1 September 1983. Applicants should have appropriate administrative experience and should be knowledgeable about recent developments in the field of physical education, recreation and sport. Salary for the post will be £18,286. Further information and forms of application for the post may be obtained from the College Secretary, Dunfermline College of Physical Education, Cromond Road North, Edinburgh EH4 6JD, to whom completed applications should be returned by 8 April 1983.

SCOTTISH HEALTH SERVICE COMMON SERVICES AGENCY SCOTTISH HEALTH EDUCATION GROUP

EDUCATIONAL ADVISER

Applications are invited for the above post which is based in Edinburgh and has become vacant on the promotion of the former holder. The post is a senior one carrying many responsibilities, primarily involving the promotion of health education through the various branches of the formal education system. The successful candidate will also be expected to provide educational advice on all aspects of health education. Applicants should have a thorough knowledge of the Scottish education system and be able to demonstrate involvement in such as curriculum development, in-service education, research, etc. Experience and interest in health/education education would be expected.

Salary Scale from 1/4/83 £16,512 to £20,556 per annum (NHS Scale 'O' 1). Application form and further details are available from the Appointments Section, Common Services Agency, Trinity Park House, South Trinity Road, Edinburgh, EH6 3SE. Completed applications to be returned by 7 April 1983. Please quote reference number U495.

LOTHIAN REGIONAL COUNCIL Department of Education

TEACHING APPOINTMENTS

Applications are invited from registered teachers for the following posts:

HEAD TEACHER *Responsibility Allowance*
Reference A East Calder Primary School £3,429
Reference D Uphall Primary School £4,134 (subject to review)

SECONDARY

PRINCIPAL TEACHER
Reference B Portobello High School £3,367 (subject to review)

Salaries will be in accordance with the current Scottish Teachers Salaries Memorandum. Housing may be available for posts in the West Lothian Division, further information may be obtained from the Divisional Education Officer. Candidates should specify for which posts they wish to apply.

For post marked Reference B: Divisional Education Officer, Edinburgh Division, 40 Torphichen Street, Edinburgh EH3 8JJ. For posts marked Reference D: Divisional Education Officer, West Lothian Division, 8901 High Street, Linlithgow EH49 7HB. Closing date for applications is 25 March, 1983.

SCOTTISH SCHOOLS SCIENCE EQUIPMENT RESEARCH CENTRE 103 Broughton Street, Edinburgh

DEVELOPMENT OFFICER (SSSERC)

Applications are invited from Science graduates with teaching experience to assist the Director and his small professional team in carrying out the expanding work programme of the Centre which includes projects and evaluation programmes and new developments in micro-electronics and computer interfaced science equipment. The Centre is at present re-organising its information resources and the Development Officer will be expected to take a major role in implementing and maintaining the new arrangements in addition to assisting in the general programme. The successful candidate's particular specialism(s) will be less important than evidence of a keen interest in practical techniques and equipment. Applicants must be versatile and willing to learn new techniques. Some knowledge of information science would be useful and experience in the use of micro-electronics in the teaching of science would also be desirable. Salary on scale £8,055-£8,945 with placing according to experience. Further information and application forms can be obtained from the Secretary, Education Offices (Division 2, Personnel), 40 Torphichen Street, Edinburgh EH3 8JJ. The closing date for receipt of applications is 8 April 1983.

APPOINTMENTS IN SCOTLAND

CENTRAL REGIONAL COUNCIL

EDUCATION COMMITTEE

Applications are invited from suitably qualified teachers for the post of Vice-Principal of the Central Regional Council for Education, who have had experience of a post of responsibility at a senior level, for the undernoted promoted post.

POST OF VICE-PRINCIPAL

ST. MARY'S HIGH SCHOOL, Stirling

The responsibility for the post is £5,045. St. Mary's High School is an all-through Roman Catholic Comprehensive school with a principal and a staff of 78. The teaching staff is organized in three departments: primary, secondary and tertiary. The post holder will be responsible for the management of the school and the staff.

The post holder will be responsible for the management of the school and the staff. The post holder will be responsible for the management of the school and the staff. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

There is also a Recreational Education structure operating in the area of the school. The post holder will be responsible for the management of the school and the staff.

MORAY HOUSE COLLEGE OF EDUCATION

LECTURESHIP — COMPUTER EDUCATION

Re-advertisement

The Centre for Computer Education provides both pre-service and in-service courses in the various aspects of the use of computers in education and in the teaching of computer studies. Computer Centre staff are also involved with the development of computer-based learning materials using microcomputers, for use within the College and by local schools.

Applications are invited from registered teachers experienced in the use of microcomputers in the teaching of their own subject disciplines. Specialties in areas other than mathematics and sciences would be advantageous. Satisfactory applicants will automatically be recommended unless they withdraw.

The salary range is £7,950-£12,561; initial placing thereon will be dependent upon present salary. Further information and application forms are obtainable from the College Secretary, Moray House College of Education, Haywood Road, Edinburgh EH8 6AG. The closing date for the receipt of completed applications is Thursday, 14th April, 1983.

Tayside Regional Council

FURTHER EDUCATION

Dundee College of Commerce, 30 Constitution Road, Dundee

Senior Lecturer in Law and Public Administration
Salary Scale - £11,700-£14,748 (Bar £12,967)

Candidates should have experience in teaching and relevant legal or administrative experience in the public and/or private sector. The successful candidate will report to an Assistant Principal and be responsible for the Law and Public Administration section currently comprised of 5 lecturing staff. Course responsibilities will include the B.N.D. in Legal Studies and a range of Public Administration courses.

Leahurst A in Accounting
Salary Scale - £7,950-£12,561 (Bar £11,700)

Candidates should have considerable practical experience in business and/or relevant teaching experience. The successful candidate will be required to teach in the field of Management and Financial Accounting up to the level of Professional Accounting Bodies.

Angus Technical College, Kepple Road, Arbroath
Senior Lecturer in Higher Business and Secretarial Studies
Salary Scale - £8,055-£11,700

The successful candidate will have the experience, proven teaching ability and personality required to lead a team of staff teaching SCOTVEC Higher National courses in Business and Secretarial Studies. Experience of curriculum development will be an additional advantage. Application forms and further details may be obtained from the Principal at the above address. In whom completed applications should be returned by Friday, 1 April 1983.

The salary attached to these posts will be on an agreed scale with the current Scottish Teachers Salaries Memorandum.

Forms of application and further details on each of the above posts are available from the Council's Education Officer, 140 West Campbell Street, Dundee DD1 1JG. Tel: 01382 58052 and should be returned thereon or by post to the Council by 1 April 1983. (15/25/81) 76000

EDUCATION OFFICER GLASGOW

To be responsible for educational liaison work on school broadcasting, mainly in the West of Scotland. Duties entail travelling and include study of school broadcasting in schools, consultation with educationists, organisation of conferences and meetings, and the writing of reports and committee papers.

Relevant professional qualifications essential. Wide educational experience must include teaching in schools and a thorough knowledge of the Scottish educational system. Duties may also include liaison work in respect of Continuing Education broadcasts directed to teacher-training. Salary £9,435 p.a. (may be higher if qualifications exceptional) by 6 increments to £12,234; plus allowance of £485 p.a. General salary review in April.

Contact us immediately for further details and application form (quote ref: 2266/TES and enclose a.e.) BBC. Appointments, London W1A 1AA. Tel. 01-580 4468 Ext. 4619.

We are an Equal Opportunities employer

BBC SCOTLAND

SPECIAL EDUCATION

SALFORD

EDUCATION DEPARTMENT
SPECIAL SCHOOL
Salford, Greater Manchester

Applications are invited from suitably qualified and experienced teachers for the post of Head Teacher of the Salford Special School, which is a day school for children with physical disabilities. The school is situated in the town of Salford, Greater Manchester, and has a roll of 120 pupils. The post holder will be responsible for the management of the school and the staff.

Salary Scale - £11,700-£14,748 (Bar £12,967)

Applications should be sent to the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. The closing date for applications is 1 April 1983.

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

For further details and application forms, please contact the Director of Education, Salford City Council, 100-102, Market Street, Salford, Greater Manchester, M4 6BT. Tel: 0161 755 6661. 100025

SUNDERLAND

EDUCATION DEPARTMENT
SUNDERLAND SCHOOL
Sunderland, Co. Durham

Applications are invited from suitably qualified and experienced teachers for the post of Head Teacher of the Sunderland School, which is a day school for children with physical disabilities. The school is situated in the town of Sunderland, Co. Durham, and has a roll of 120 pupils. The post holder will be responsible for the management of the school and the staff.

Salary Scale - £11,700-£14,748 (Bar £12,967)

Applications should be sent to the Director of Education, Sunderland City Council, 100-102, Market Street, Sunderland, Co. Durham, SR1 1JG. The closing date for applications is 1 April 1983.

For further details and application forms, please contact the Director of Education, Sunderland City Council, 100-102, Market Street, Sunderland, Co. Durham, SR1 1JG. Tel: 0191 755 6661. 100025

For further details and application forms, please contact the Director of Education, Sunderland City Council, 100-102, Market Street, Sunderland, Co. Durham, SR1 1JG. Tel: 0191 755 6661. 100025

For further details and application forms, please contact the Director of Education, Sunderland City Council, 100-102, Market Street, Sunderland, Co. Durham, SR1 1JG. Tel: 0191 755 6661. 100025

For further details and application forms, please contact the Director of Education, Sunderland City Council, 100-102, Market Street, Sunderland, Co. Durham, SR1 1JG. Tel: 0191 755 6661. 100025

For further details and application forms, please contact the Director of Education, Sunderland City Council,

77

BW7

Orlmon Woodward,
tutorial rollege with
its in London BW7
rior in Art iflatory
ith High end Late
ce and 19th end
ary Art. Degree in
y. A-level theelinu
and enthusiasm
Age 24 - 30.
more details to: Man-

Place, **8W7**
186624

DITTINGS ONLY
tutor required
all classes 1 pupil
1st London W6
post 8 a.m. - 1
days weekly.
01-748 8403

SEX
N'S SCHOOL
d. Midd
ni Dox/Seardine
and pupils
SEPTEMBER o mil-
lited teacher of
HY, and of ECO-
mply in writing ju

g telephone collect
ing s.a.o. (57866)
165624

S
ITNE COLLEGE
Rumbon, Clwyd, N.
in VERMONT

and FITENCH up to
GCE 'O' level.
It is residential in a
rural House.
Great and numerous
it would be a safe
Belien, Selary, Li-
Grale which is re-
Burlinn; Govern-
mentation Brheme.
to the headmaster
fruit curriculum Viteo
times old address
to whom reference
made. 165380; 165024

for September 1983.
qualified person to
combination of al
of the following
Economic theory;
Maths - up to 'O
Level work would
in some subjects.
women and other
activities welcome.
ation provided for
erson.

as of two referees to
Mr. Sirahallian
Fargoedenny, Perth
1655741, 180694

IN AMERICA
O-WITH CHILDREN
of sports & crafts
(min. Jan. 1946)
U.S. childrens
var 16,000 SUNC-

3 weeks, hard
 than up to 6 weeks
 flight, work visa.
 and board oil price for
 of \$280 or \$265.
 STENO: CONTRACT S-
 cards, SUNACAMP,
 a Steno, LONDON
 Tel: 01-d37 7686.
 t6d624

CANCIES 1983
CRAFT
A level. Craft needs

STER
to accommodation and
Mathematics, Biology
dini or non-resident,
and day school of 257

... we seek staff who
... such a community,
mature and loving
... ions, experience and
... and atmosphere are
... ill.
... which post you are
... e and qualifications,
... ferences, one of which
... ces if you don't name
... e is bottom left hand

CLEVELAND EDUCATION COMMITTEE HARTLEPOOL COLLEGE OF FURTHER EDUCATION

Principal: C. C. Doran, BSc, M. Ina MC, Carl Ed

HEAD OF DEPARTMENT MATHEMATICS, COMPUTING AND INFORMATION TECHNOLOGY

Applications are invited for the post of HEAD OF DEPARTMENT OF MATHEMATICS, COMPUTING AND INFORMATION TECHNOLOGY, duties to commence on 1st September, 1983.

Grade II: Salary - £11,406 to £12,864.

Further particulars and application forms are available from The Principal, Hartlepool College of Further Education, Stockton Street, Hartlepool, Cleveland TS25 7NT, to whom completed forms should be returned by not later than Friday, 8th April, 1983.

Network Technical College

Head of Department of Engineering and Science

Grade III £12,477-£13,932
(pay award pending)

Applications are invited from suitably qualified persons for the Headship of this department, tenable from 1st September, 1983.

The department provides a wide range of full-time and part-time courses and applicants should have appropriate teaching, organisational and administrative experience and a sound knowledge of Further Education.

Entry point on the salary scale according to qualifications and experience.

Application forms and further particulars are available from the Director of Education, Further Education Section (Ref. F12), County Hall, West Bridgford, Nottingham, NG2 7QP, Telephone: Nottingham (0533) 550023, extension 3288 or 3422. Closing date: 1st April, 1983.



Nottinghamshire
County Council
County Hall West Bridgford
Nottingham NG2 7QP

EDUCATION DEPARTMENT

North West Kent College of Technology Department of Electrical & Electronic Engineering

Applications are invited for the post of

LECTURER Grade 2 in Electronic Engineering

The person appointed will have the recent industrial experience as well as academic qualifications required to develop new and supervise existing micro-electronics courses in this expanding department. Particular experience with microcomputers, robotics or other modern industrial applications would be an advantage.

Department of
General Vocational Education

A vacancy exists for a

LECTURER Grade 2 in Computer Studies

The person appointed will have recent industrial or commercial experience as well as appropriate academic qualifications. A range of courses including TEC/BEC National Diploma in Computer Studies will be of concern. An interest and ability for developing Computer Assisted Learning Systems would be an advantage.

Further information and application forms for both appointments can be obtained from the Principal, North West Kent College of Technology, Miskin Road, Dartford, Kent DA1 2LU. Tel: Dartford 25471.



KENT COUNTY COUNCIL

COLLEGES OF FURTHER EDUCATION

SUTTON COLLEGE OF FURTHER EDUCATION

Education Department
Sutton College of Further Education
Sutton Road, Sutton
Surrey SM5 2ET

HEAD OF DEPARTMENT OF BUSINESS AND MANAGEMENT

Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Sutton College of Further Education, Sutton Road, Sutton, Surrey SM5 2ET. Tel: 01-440 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

COLLEGES OF FURTHER EDUCATION

SUTTON COLLEGE OF FURTHER EDUCATION

Education Department
Sutton College of Further Education
Sutton Road, Sutton
Surrey SM5 2ET

HEAD OF DEPARTMENT OF BUSINESS AND MANAGEMENT

Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Sutton College of Further Education, Sutton Road, Sutton, Surrey SM5 2ET. Tel: 01-440 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

WALSALL COLLEGE OF TECHNOLOGY

Walsall College of Technology, Walsall, Staffs. Applications are invited for the post of Head of Department of Business and Management, duties to commence on 1st September, 1983.

Applicants must have had administrative experience at Head of Department level. Salary: £11,406 to £12,864 plus London Allowance £215.

Further particulars and application forms are available from the Principal, Walsall College of Technology, Walsall, Staffs. Tel: 091 250018.

NORTH YORKSHIRE COUNTY COUNCIL

Scarborough Technical College

DEPARTMENT OF ARTS AND ADULT STUDIES

LECTURER GRADE II GRAPHIC DESIGN

To teach Course Director for Graphic Design DATEC Diploma and Certificate courses. Candidates should be qualified Graphic Designers with relevant teaching, organisational and industrial experience.

Salary: £11,406 to £12,864 plus London Allowance.

Further details and application forms available from: The Principal, Scarborough Technical College, Lady Edith's Drive, Scarborough, YO12 5RN. Tel: (0723) 72106 and should be returned by 11th April, 1983.

SOUTH GLAMORGAN COUNTY COUNCIL BARRY COLLEGE OF FURTHER EDUCATION DEPARTMENT OF COMMERCE AND LIBERAL STUDIES

LECTURER GRADE I IN GENERAL AND COMMUNICATION STUDIES

Required for the 1st September, 1983. Applicants are invited from suitably qualified graduates preferably with appropriate teaching experience. Applicants would be required to teach both full-time and part-time students, and possibly through an extended college year. An ability to teach the B.E.C. modules in Public Administration and Government would be an advantage.

The salary scale (under review) is at present £5,365 to £8,267.

Further details and application forms can be received from the Principal, Barry College of Further Education, Colcot Road, Barry, CF8 8YJ, telephone 733261, on receipt of an a.s.s., to whom application forms should be returned within 14 days of the advertisement. (Post Ref. BFE 83/11).

ERITH COLLEGE OF TECHNOLOGY

Principal: O. F. Glover, M.A., B.Sc., F.C.I.B., F.I.M., F.I.M.

Applications are invited for the following post, to take effect as soon as possible.

LECTURER GRADE I IN CHILD DEVELOPMENT

Required to teach Child Development as a main subject to students on a variety of courses within the Department of Social Care & Creative Studies. Ability to deliver on more of the following subjects would be an advantage:

Communications: English, Social Studies, Elementary Psychology.

Some visiting of students on placements may be required. A teaching qualification and experience in the Nursery Infant field is essential.

SALARY SCALE (including London Allowance):

LECTURER GRADE I: £5,970 - £9,982

(According to qualifications and experience)

Application forms and further particulars from Senior Administrative Officer, Erith College of Technology, Tower Road, Erith, Kent, DA11 3JA (0473 2211) from 1st April 1983, to whom they should be returned within two weeks of the appearance of this advertisement.

The Council operates an enhanced scheme of fringe benefits for staff, including payment of legal fees for house purchase, removal expenses and education allowances.

Applications are invited for the following posts:

1. PRINCIPAL LECTURER in ENGINEERING, to act as Deputy Head of the Engineering and Construction Department.

2. LECTURER II in COMPUTER STUDIES

3. LECTURER II in MANAGEMENT STUDIES

4. LECTURER I in ACCOUNTING AND FINANCIAL CONTROL

5. LECTURER I in SECRETARIAL STUDIES

6. LECTURER I in ELECTRONICS AND COMPUTING TECHNOLOGY

Salaries:

Principal Lecturer: £11,831 - £15,018 p.a.

Lecturer II: £8,855 - £11,022 p.a.

Lecturer I: £5,365 - £8,267 p.a.

Application forms and further particulars available from the Principal, (Tel: 0703/614444).

Adm. Ref. 110.32.

GLOUCESTERSHIRE COLLEGE OF ARTS AND TECHNOLOGY

INFORMATION TECHNOLOGY PROGRAMME

The College, with bases in Cheltenham and Gloucester - is contributing to the rapid expansion nationally of advanced courses in Information Technology, an area in which provision for full time and part time students is already extensive.

The following new posts will be offered to suitably qualified and experienced candidates:

1 PRINCIPAL LECTURESHIP (Computing Studies)

7 SENIOR OR GRADE II LECTURESHIPS (Computing Studies)

1 SENIOR OR GRADE II LECTURESHIP (Statistics and Operational Research)

1 GRADE I LECTURESHIP (Computing Studies)

1 GRADE II LECTURESHIP (Associated Management Studies)

Application forms and further details are obtainable from the Administrative Officer (Staffing) Gloucester, Cheltenham Lane, Gloucester, Telephone 0452-26321. Informal enquiries may be made to Mr. P. Davey, Mathematics & Computer Studies at Park Campus, Cheltenham (0242-28021).

College of Further Education Plymouth Department of Electrical Engineering Grade VI

Required from 1st September, 1983.

Principal Lecturer (Deputy Head of Department)

Applicants should ideally be graduates with experience of the operation of a College Department. Good teaching experience and a background in electronics and modern technology would be an advantage.

The successful candidate will assist the Head of Department with administration, planning and development of academic work and assessment techniques.

Salary: £11,831 to £13,290 (bar point) to £15,018.

Application forms and further particulars (SAE please): The Registrar, College of Further Education, Kings Road, Devonport, Plymouth, PL1 5QG.

Tel: (0752) 284707.

BRAINTREE COLLEGE OF FURTHER EDUCATION

TWO NEW SENIOR LECTURERS

required, if possible, from 1st May, 1983.

Department of Adult & General Education

The person appointed will have a major role in curriculum development within General and Communication Studies and will have a leadership function in these and allied areas of work within the newly formed Department.

Applicants should be graduates with recent teaching and organising experience in General Studies. A professional teaching qualification is required.

Department of Business & Catering Studies

The person appointed will be the leader and co-ordinator of Business and Professional Studies and Secretarial Studies in the newly re-structured Department.

Candidates should have appropriate professional qualifications, be teacher trained and have recent Further Education teaching experience.

Salary scale for both posts: £10,173-£11,864 (Bar)

Further details and application forms (a.s.s. please) from: The Principal, Braintree College of Further Education, Church Lane, Braintree, Essex CM7 6BN.

Closing date: 31st March, 1983.

ESSEX County Council

COLLEGES OF FURTHER EDUCATION

BIRMINGHAM EDUCATION DEPARTMENT

Education Department
Birmingham Education Department
Birmingham B1 1TT
Tel: 021-440 9881

DEPARTMENT OF ELECTRICAL ENGINEERING

LECTURER GRADE I in ELECTRONICS required to teach electronics and related subjects to students following EC Ordinary programme. Candidates must possess appropriate qualifications and have experience of industrial or domestic electronic applications. An interest in microprocessor applications would be a considerable advantage.

Salary: £5,355 to £8,267 (placement according to approved qualifications and experience).

Application forms and further particulars from the Principal, 157571.

240026

BUCKINGHAMSHIRE

OXFORD COLLEGE OF FURTHER EDUCATION
Oxford Road, Oxford
OX1 2BP

Applications are invited from suitably qualified persons for the post

GULF AND WESTERN AMERICAS CORP.

Dominican Republic

The Gulf & Western Foundation in the Dominican Republic operates the Abraham Lincoln School and invites applications from suitably experienced teachers for the following positions which will be available in September 1983, except where indicated.

PRIMARY/INFANT SCHOOL (5-11 Years)

2 TEACHERS FOR 7-8 Year olds

Reference: P.1.1

1 TEACHER FOR 9-10 Year Olds

Reference: P.1.2

1 TEACHER FOR GIRLS PE

with some English and Mathematics

Reference: P.1.3

For any of the above posts the ability to teach music would be an asset.

SECONDARY SCHOOL (11-16 Years)

PHYSICAL SCIENCE

This could be a post of responsibility for a suitably qualified candidate. Physical Science is taught in the lower grades with Physics and Chemistry taught as separate subjects in the upper grades. The ability to offer one of these subjects to an advanced level would be an advantage. This post could be for immediate appointment.

Reference: P.2.1

SCIENCE To teach Integrated Science and Physical Science in the Lower School. Reference: P.2.2

BIOLOGY To teach Biology throughout the Upper School. This could be a post of responsibility for a suitable candidate. Reference: P.2.3

MATHEMATICS (1) To teach the subject throughout the school, and interest in Computer Studies is essential. The selected candidate will have responsibility for the Mathematics curriculum within the school. Reference: M.2

MATHEMATICS (2) To teach Mathematics in the Upper School. Reference: M.2

GEOGRAPHY To teach the subject in the Upper School. An interest in Economics would be an advantage. This post is for immediate appointment. Reference: G.1

FRENCH To teach French to the middle age range. Some English teaching in the Lower School is also required. Reference: F.1

Benefits and conditions of service: The contract is initially for 2 years, return flights paid. We offer a competitive salary. The Dominican Republic has a low rate of taxation. Free furnished accommodation is provided. A company medical scheme is available.

These positions are open to single and married couples. Married couples who both teach are preferred but this is not an essential requirement.

Please apply with full CV including the names, addresses and telephone numbers of two referees. Include a telephone number where you can be reached during 1.2 and 3 April.

Candidates selected for interview will be notified by telephone and interviews will be held in London during 4-12 April.

Applications to be sent to: Mr D. J. Tully, Headmaster, Abraham Lincoln School, 20 Little Chive, Peasmarsh, Kent. The Dominican Republic has a low rate of taxation. Clearing date for applications 31st March 1983. Include Reference on outside of envelope.

OVERSEAS

continued

GREECE

Experienced EFL teachers required for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

GREECE

Wanted: 7 E.F.L. male teachers for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

ITALY

"ITALIAN IN VENICE" 24th August 1983. 45 hours Italian lessons plus literature and culture. Accommodation arranged. Please write: The British Council, Venice. Tel. 86613 (184827) 160000

KUWAIT

Overseas English School for 1983-84. Headmaster, Deputy Headmaster, Teacher of English for Junior classes and General English teachers for infant and senior classes. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

NIGERIA

A teaching couple are required for 1 September 1983 for a British-based curriculum school in Nigeria.

This is an isolated site school with approximately twenty children between the ages of 5 to 13 years. There is an intake of British and other nationalities, so an ESL qualification would be an advantage.

The two posts are for a Headteacher or Assistant Teacher who between them could teach the whole age range and provide varied extra-curricular activities.

Applicants must be fully qualified teachers with a minimum of three years experience and previous experience overseas would be an advantage. The contract is for two years renewable and the salaries are in the region of £12,500 to £13,500 per annum.

For further details and application form please write to:

The Director
World-wide Education Service
44-50 Canaburgh Street
London NW1 3NN

THE SANDFORD ENGLISH COMMUNITY SCHOOL
ADDIS ABABA, ETHIOPIA

This independent Multi-national School providing English based education for the children of the many representative nationalities resident in Addis Ababa requires for the 1983/84 Session, a

DEPUTY HEAD TEACHER

Applications are invited from well qualified and suitably experienced teachers for the above post. The person appointed will, in addition to administrative duties, teach a part time table.

The initial contract will be for two years with a salary on the scale 31,000 to 34,000 Ethiopian Birr per annum. The present (February 1983) exchange rate is 3.14 Ethiopian Birr to one (£) pound sterling.

Free air transportation with unaccompanied baggage allowance is provided at beginning and end of contract and a return air fare to Kenya is provided at end of contract for leave. Furnished accommodation is provided and medical expenses, excluding dental treatment, within Ethiopia are paid by the School.

Letters of application with curriculum vitae and names and addresses of two referees should be sent to the Headmaster, P.O. Box 30055 MA, Addis Ababa, Ethiopia to arrive by 14th March, 1983.

MINISTRY OF DEFENCE

Service Children's Education Authority

Applications are invited from qualified Primary Teachers of at least two years experience who are at present teaching in schools in the United Kingdom, for the following vacancies in September 1983:

N W Europe
Remedial Education/Special Educational Needs - Primary
Advisory Teacher - Scale 3 (Ref W1)

Applications are invited from suitably qualified teachers who have considerable experience in this field with children in the 5-11 age range, and who also hold a specialist qualification in the education of children with learning difficulties.

The successful candidate is likely to be working at present in primary schools with a responsibility for Remedial/Special Education throughout the complete age range, and to be familiar with the appropriate screening and testing methods.

The advisory teacher will provide primary schools with appropriate advice on organization, practices and procedures, methods, materials and teaching side. This will entail teaching alongside colleagues to help them gain insight into appropriate techniques.

The successful candidate will become part of the Advisory Service Team led by the Senior Adviser and will work from an Area Education Office but will be attached to a particular primary school.

Head of Department - Infant -
Scale 3 - Lippstadt Primary
School Lippstadt (Group 5) (Ref C5)

The HOD/Infants will be responsible for the general running of the Infant Department and will play a senior part in the establishment, implementation and evaluation of school policies with special reference to infant and pre-school children. The HOD/Infants will also have a class teaching responsibility.

The Infant Department consists of two open-plan four class units. There are 140 children and five staff in the Department.

Head of Department - Infants -
Scale 2 - Wetter Primary School,
Wetter (Group 1) (Ref C2)

A teacher is required for this two-teacher school to take the Infant class with an age range of 5-7 years. In addition, the teacher will have responsibility for the general welfare of the girls and to deputise for the Headteacher in his absence.

There are 24 pupils on roll and 2 staff.

Head of Infants - Scale 2 -
Wavell Primary School - Hohns
(Group 4) (Ref E1)

An experienced teacher is required as Head of Infants. The successful candidate will be expected to lead a team of four infant teachers in all aspects of the curriculum and to take a keen interest in home school liaison.

There are 204 pupils on roll and 11 staff.

Head of Department - Infants -
Scale 2 - St Barbara's Primary
School (Group 2) (Ref C4)

St Barbara's is a small school and the successful candidate will be solely responsible for the whole Infant Department. He/she will need to be resourceful, well organized and be expected to fulfill some of the duties of a Deputy Head as well as being Headteacher in the absence of the Head. He/she will have had at least five years experience with infants and may already hold a post of responsibility.

There are currently 64 children on roll and 3 staff.

Scale 2 Language Development -
Hemer Primary School - Hemer
(Group 6) (Ref C1)

The successful candidate will be a language specialist committed to the concepts of Breakthrough to Literacy and an experienced infant teacher. Responsibility will involve the organization of language development in the lower part of the school, continuation of the Breakthrough to Literacy scheme, assistance in the maintenance of the reading scheme and organization of the school bookshop.

There are 322 pupils on roll and 15 staff.

Scale 2 Music - Heide Primary
School - Fallingbommel - (Group 5) (Ref E2)

The successful candidate will be expected to maintain music guidelines, organise and order the resources necessary to fulfil this function, co-ordinate and supervise staff with regard to music and organise all musical performances.

There are 341 pupils on roll and 15 staff.

Scale 2 Musical Activities -
Swinton Primary School -
Munster (Group 4) (Ref C4)

A scale 2 teacher is required to be responsible for musical activities throughout the school. The successful applicant must be a pianist and will have full-time responsibility for a lower junior class. Applicant should be committed to team-operative teaching in an open-plan community school.

There are currently 235 pupils on roll and a staff of 11.

Teacher in Charge - Special
Education Unit - Scale 1 - plus
Special Unit Allowance
Charlottenburg First School -
Berlin (Group 4) (Ref B1)

Special Unit in Service Children's Schools are intended primarily for slow learning children although consideration is given to the admission of children with other types of disability. The Unit at Charlottenburg caters mainly for children in the 6-9 year age range, but under certain circumstances older children may be admitted. There are usually up to a maximum of eight children attending at any one time. Admission to the Unit is on the recommendation of the Area Educational

Psychologist, and there are regular monitoring and support and visits from all members of the Child Guidance team at Hennover.

The needs of the children are various and include children with physical, social and behavioural as well as intellectual difficulties.

The teacher in charge is responsible for the day management of the Unit, including the planning of suitable work programmes for each child. The school has an active policy of integrating children from the Special Unit into other classes whenever possible.

There are 206 pupils on the school roll and 13 staff.

Applicants should have appropriate qualifications in Special Education.

Scale 2 Teacher-in-Charge (Part-
time teaching post available for
spouse dependent on school
roll) Dennenburg Annexe -
Dennenburg (Ref E3)

Applications are invited from suitably qualified husband and wife teams to staff this one class annexe to Munsterlager Primary School situated near the East German border 70 kms from Munsterlager.

Preference will be given to candidates who could offer experience across the whole primary age range.

If numbers on roll exceeds 15 the selection will be 1.5 teachers and when the numbers fall below this figure the spouse of the successful applicant would be called upon, when required, for supply cover.

Naples
British Forces School (Group 3)
Two Scale 1 Vacancies Middle
Juniors (Ref N1)

The Junior Department consists of 3 classes. The applicant should:

a. Be capable of taking responsibility for the appraisal and updating of the school's Languages and Health Education syllabuses.

b. Be capable of teaching Music and Singing. In addition, he/she will be required to play the piano in school assemblies and be responsible for the music for school plays and concerts.

Top Infants (Ref N2)

The Infant Department consists of 2 classes. The applicant should:

a. Be capable of taking responsibility for the appraisal and updating of the school's Environmental Studies and Religious Education syllabuses.

b. Possess a good working knowledge of the "Breakthrough to Literacy Scheme" for Language.

The closing date for the receipt of applications is 1 April 1983. Requests for application forms should be made on a post card or by telephone, quoting the job references, before 4.30pm to: Service Children's Education Authority MCD/540, Teacher Appointments Section, 1AE Court Road, Egham, London SE26 6NR. Telephone: 01-839 2112 Ext 221 or 238.

Applicants for both jobs should be self sufficient and possess an independent nature. A driving licence is essential and an ability to speak some Italian would be an advantage.

Cyprus
Head of Infants - Scale 3 -
Akrotiri Primary School (Group 6)
(Ref M1)

HOD infants will be responsible for early years in the school. Ideally able to play the piano.

The successful applicant should be keen to work with slower learners and high flyers, be able to offer curricular strength in language and music, and be a member of Senior Management Team.

There are 440 pupils on roll and 21 staff.

Scale 1 Remedial and
Compensatory Education
(Language Development)
Berengaria Primary School
(Group 4) (Ref M2)

The successful applicant should have experience in working with slow learning children and will be expected to teach small groups throughout the primary age range.

The work will involve assessment, design of appropriate work programmes, teaching and monitoring progress.

There are 213 pupils on roll and 11 staff.

General
Scale 1 Primary Teachers (Ref W2)

Primary teachers, particularly in the Infant Age range, are also required to fill some One vacancies in all areas.

Conditions of Service
Salary is in accordance with the current British Forces School scale plus a London Allowance of £234 p.a. Superannuation - normal rights are safeguarded. Foreign Service Allowance - a tax free allowance is payable. Accommodation - is provided rent free.

Duration of Engagement - Initial engagement is for three years. All applicants should normally be resident in the United Kingdom. Teachers do not normally serve in the service Children's Schools abroad after the age of 60, and therefore, applicants should be under 47 years at the commencement of the engagement.

The closing date for the receipt of applications is 1 April 1983. Requests for application forms should be made on a post card or by telephone, quoting the job references, before 4.30pm to: Service Children's Education Authority MCD/540, Teacher Appointments Section, 1AE Court Road, Egham, London SE26 6NR. Telephone: 01-839 2112 Ext 221 or 238.

For further details and an application form please write, quoting the post reference number to: KELT Section, Overseas Educational Appointments Department, The British Council, 20-21 Tottenham Court Road, London W1P 0DT.

For further details and an application form please write, quoting the post reference number to: KELT Section, Overseas Educational Appointments Department, The British Council, 20-21 Tottenham Court Road, London W1P 0DT.

For further details and an application form please write, quoting the post reference number to: KELT Section, Overseas Educational Appointments Department, The British Council, 20-21 Tottenham Court Road, London W1P 0DT.

For further details and an application form please write, quoting the post reference number to: KELT Section, Overseas Educational Appointments Department, The British Council, 20-21 Tottenham Court Road, London W1P 0DT.

REPUBLIC OF SINGAPORE

Teachers of English
in Secondary Schools

Applications for the above posts are invited from qualified teachers of English holding Honours Degrees (or equivalent qualifications) in English or the Humanities, who have successfully taught English in British Secondary Schools at level up to GCE 'O' level standard. Preference will be given to candidates with Honours Degrees in English who have more than three years relevant experience. Interviews are scheduled to be held in London in mid-May 1983 and successful applicants will take up their appointments at the beginning of the academic year in January 1984.

There are presently 125 native-speaking English teachers in Singapore Secondary Schools, almost all of whom have been recruited from Britain during the last three years. Although many of these teachers are teaching English up to Singapore/Cambridge University GCE 'A' level standard, there is now a greater need for teachers to teach students in the Secondary one to Secondary four range (12-18 years) who will eventually sit for the Singapore/Cambridge University GCE 'O' level examinations.

Teachers appointed to the Singapore Education Service will have the opportunity of working with highly motivated students, who live in a society which has a high regard for education and which puts a premium on academic success. They will also have the opportunity of living in a rapidly developing modern city but one which still retains the traditional life-styles and cultures of its peoples.

The basic terms of service include the following:
*Renewable 2 year contracts offering the prospect of long term service.
*Basic salaries ranging from £2827-£17,808 p.a.
*Additional housing allowance varying according to marital status.
*Children's education allowance where applicable.
*Tax free superannuation benefits amounting to 22% of total salary inclusive of allowances.
*Medical benefits.
*Baggage allowance.
*Free passage for home leave after each 2 year contract.
*Interest free selling-in loan.

For application forms and an information booklet please write to or telephone: Teacher Recruitment Unit, Singapore High Commission, 5 Chevalin Street, London SW1. Tel: 01-235 5378 (Jackie), 01-235 9087/8/9 (Evelyn).
Completed application forms should be returned by 15th April, 1983.

Aerodynamics Instructor

An Aerodynamics Instructor is needed for our training staff at the King Faisal Air Academy at Riyadh in Saudi Arabia, where British Aerospace is responsible for training Saudi nationals in various skills needed in the operation and maintenance of a modern air force.

This is an excellent opportunity for a man with the right qualifications and experience to earn a high tax-free salary as an Aerodynamics Instructor...

...working in Saudi Arabia with
BRITISH AEROSPACE

The successful applicant will be required to instruct student pilots of the Royal Saudi Air Force in the design and aerodynamic performance of modern high-speed aircraft. Preference will therefore be given to applicants, aged 25-50, who have a good degree in Aeronautical Engineering and at least three years' teaching experience. Consideration will, however, be given to those with HND/HNC in this discipline and at least five years' teaching experience.

In addition to the high tax-free salary and annual incremental rises, successful applicants will receive free accommodation, meeting and medical care and other benefits, including generous travel-paid UK leave.

Please apply in writing giving brief details of appropriate experience to telephone Preston 634317.

The Personnel Officer, Saudi Arabia Support Dept-008/TES
FREEPOST, British Aerospace Aircraft Group,
Watton Division, Watton Aerodrome,
Preston, Lancs: PR4 1LA.

BRITISH AEROSPACE
Unequalled in the range of its capabilities

For further details and an application form please write, quoting the post reference number to: KELT Section, Overseas Educational Appointments Department, The British Council, 20-21 Tottenham Court Road, London W1P 0DT.

For further details and an application form please write, quoting the post reference number to: KELT Section, Overseas Educational Appointments Department, The British Council, 20-21 Tottenham Court Road, London W1P 0DT.

For further details and an application form please write, quoting the post reference number to: KELT Section, Overseas Educational Appointments Department, The British Council, 20-21 Tottenham Court Road, London W1P 0DT.

OVERSEAS

continued

Wanted: 7 E.F.L. teachers, preferably married, for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

ITALY

International Co-Education Day School 5-18 years with two years curriculum. Graduate teachers with 2 years experience. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

Applications by express letter to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

ITALY

Qualified and experienced E.F.L. teachers, preferably married, for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

KENYA

IMANI SCHOOL, P.O. Box 150, Thika, Kenya. Qualified teachers for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

Applications by express letter to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

KENYA

The Government of Kenya seeks male teachers qualified to teach in the level of GCE 'O' level. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

Applications by express letter to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

LIBYA

THE BRITISH SCHOOL, Benghazi. Qualified teachers for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

MILAN

SIR JAMES HENDERSON, SENIOR. Qualified teachers for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

NAMIBIA

The Reading Foundation, Windhoek. Qualified teachers for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

SOUTH AFRICA

Qualified teachers for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

TANZANIA

Qualified teachers for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

TANZANIA

Qualified teachers for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

TANZANIA

Qualified teachers for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

TANZANIA

Qualified teachers for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

TANZANIA

Qualified teachers for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

TANZANIA

Qualified teachers for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

TANZANIA

Qualified teachers for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

TANZANIA

Qualified teachers for 1983-84. Salary £10,000-12,000 per annum. For one academic year or 2 months. Applications to: Mr. A. Katselidis, English Language Centre, Greece. 1574301 460000

THE
BRITISH
COUNCIL

The KELT Scheme is part of Britain's programme of aid to developing countries

OVERSEAS

continued

OVERSEAS

The Department of Education requires qualified Teachers for the following posts:

PHYSICS

(Group 11 Boys' Comprehensive)
1 post offering physics up to 'O' level, with general science in the lower school.

BIOLOGY

(Group 11 Girls' Comprehensive)
1 post offering biology up to 'O' level, CSE Human Biology, and integrated science in lower school.
Ability to teach a second science up to 'D' level an advantage.

SPECIAL EDUCATION

(St Martin's Special School - Group 3S)
1 post seeking teacher qualified to teach handicapped children, able to take wide range of ability/handicap, mainly ESN (a), 4-15 years old.
Experience with hearing impaired children an advantage.
Salary is 97% of Burnham Scale 1.
Subsidised hostel accommodation available. Return air passage, baggage expenses and employer's share of superannuation contribution are paid.
Successful applicants will be required to take a medical examination.
Application forms obtainable from: The Manager, Gibraltar Tourist Office, 179 The Strand, London WC2R 1EH. (Tel: 01-836 0777).
Completed application forms should be returned to The Secretary, Public Service Commission, Government Secretariat, Gibraltar, not later than Monday, 16th April 1983.

Volunteers Service Overseas (VSO) is a non-profit making charity which provides a wide range of opportunities for young people to gain overseas experience. For details of these and other posts contact the Education Unit, VSO, 154-155, London SW1P 3JH. Tel: 01-836 0777.

In Sri Lanka, one Teacher of Mathematics and one Teacher of English are required for a secondary school. Qualifications required: RSA, Stage III, plus teaching qualification. Salary is 97% of Burnham Scale 1. Subsidised hostel accommodation available. Return air passage, baggage expenses and employer's share of superannuation contribution are paid. Successful applicants will be required to take a medical examination.

Application forms obtainable from: The Manager, Gibraltar Tourist Office, 179 The Strand, London WC2R 1EH. (Tel: 01-836 0777).
Completed application forms should be returned to The Secretary, Public Service Commission, Government Secretariat, Gibraltar, not later than Monday, 16th April 1983.

Educational Posts Overseas.

BAHRAIN

Post 1 Teacher of French
Post 2 Teacher of English Language and Literature
Post 3 Teacher of Mathematics
Post 4 Teacher of Maths/General Science

Bahrain School, Jufair
Reference: 83 A 37-40

The Bahrain School is an English-medium International School, with excellent facilities, providing Primary and Secondary education for boys and girls. Appointees will teach in the British Curriculum system of the Secondary school. (400 pupils aged 11-16)

Duties: Posts 1-3 will teach levels I-V (11-17 years); post 4 will teach levels I-III (11-14 years). For forms I-III the syllabus is locally prepared as a basis for later CSE and GCE 'O' level work undertaken in forms IV and V. An ability and willingness to assist in extra-curricular activities would be an advantage.

Qualifications: Candidates should be British citizens preferably aged 25-45 and with a British educational background. They should be degree holders with a PGCE or diploma and at least two years relevant teaching experience. A.B.E.D would be desirable.

Salary: Likely to be in the scale BD5698-BD7281 per annum (£3,844-£12,724 at £1 = BD0.573) tax free, paid in Bahraini Dinars; plus cost of living allowance on scale BD655-BD735 p.e.; post differential of 15% of basic salary and incidental allowance of 16% of basic salary.

Benefits: Housing allowance; annual increment; annual passage-paid leave for postholder and family (children unmarried and under 21 years); baggage allowance. One year contract, renewable, guaranteed by the British Council.

Closing date: September, 1983.
Closing date for applications: 9th April, 1983.

SUDAN

Khartoum International Primary School
8 Assistant Teachers

Reference: 83 A 13-20
The International Primary School is a private school based on the British educational system with English as the medium of instruction, and has 280 children of many nationalities aged 5-11.

Duties: To teach the full range of general subjects at primary level.
Qualifications: Candidates, single or married, teaching couples only, must be native English speakers with a UK primary teaching certificate or its equivalent. It is expected that most of the successful candidates will be young newly qualified teachers without teaching experience, but it is hoped that some will have a year or two of experience.

Salary: The emoluments consist of a taxable and a tax free component in Sudanese pounds, a tax free sterling component, and a gratuity on completion of two years, currently totalling approximately £4,535-£5,692 net, based on £1 = LS2.0192. There is also an annual bonus.

Benefits: Free shared furnished accommodation, electricity allowance of LS20 per month, free medical treatment, and a passage paid leave, settling in allowance and 2 year contract guaranteed by the British Council.

Starting date: Between 1st and 31st August, 1983.
Applications should reach us by the end of March if possible.

THAILAND

Director of Studies, British Council Centre, Bangkok.
Reference: 83 D 29

Duties: To be responsible for teacher management and staff development, in-service training, classroom observation and counselling; testing and test development; materials policy and English Language Teaching for a minimum of 4 hours per week.
Qualifications: Single candidates, or married with ELT qualified spouse, between the ages of 28-45 who should have a degree, or a teaching qualification, a PGCE (including TEFL) or dip. TEFL, an MA in Applied Linguistics or an MEd (TEFL). A minimum of 5 years teaching experience is needed preferably including administration.

Salary: Baht 30,833 (approx. £10,000 per annum according to the rate of exchange).
Benefits: Free, baggage allowance, rent allowance, one year contract, renewable.
Starting date: 1st July, 1983.

For further details and application form, please write quoting the post reference number to Overseas Educational Appointments Department, The British Council, 90-91 Tottenham Court Road, London W1P 0DT.

English Language Centre

University of Petroleum & Minerals
Dhahran, Saudi Arabia

The ELC is responsible for preparing approximately 1000-1400 male students per year for study in all-English medium technical courses leading to Bachelors Degrees in Science, Engineering, and Management. The centre currently employs some 70 teachers (British, American, Canadian and Australian) and is expected to expand. The programme is based on English for academic purposes. Well-equipped language lab, an audio-visual studio and 60 computer assisted instruction terminals form part of the technical equipment available.

We have opportunities for well-qualified, committed and experienced Teachers of English as a foreign language as from September 1983. Applicants should be willing to teach in a structured, intensive programme which is continually evolving and they are encouraged to contribute ideas and materials.

QUALIFICATIONS:

1. M.A. in TEFL/ESL or Applied Linguistics.
2. Postgraduate Diploma in TEFL or TESL from a recognised University.
3. Postgraduate Certificate in Education (TEFL/ESL).

EXPERIENCE:

Minimum two years' teaching experience in TEFL/ESL overseas.

STARTING SALARY:

Depending on qualifications and experience. Salary is free of Saudi taxes.

ADDITIONAL BENEFITS:

1. Rent-free, air-conditioned furnished accommodation. All utilities provided.
2. Gratuity of one month's salary for each year worked, payable on completion of final contract.
3. Two month's paid summer leave each year.
4. Attractive educational assistance grants for school-age dependent children.
5. Transportation allowance.
6. Possibility of selection for University's ongoing summer programme and evening programme with good additional compensation.
7. Outstanding recreational facilities.
8. Air fares, excess baggage allowance and per diems paid at beginning, middle and end of contract.

CONTRACT:

For two years renewable.
Write for an application form quoting this advertisement and include a complete curriculum vitae (it is vital that you include this information, and only this information, at this stage) to:

Dean Of Faculty & Personnel Affairs,
University of Petroleum & Minerals,
P.O. Box 144, Dhahran International Airport,
Dhahran, SAUDI ARABIA.



Where will you be tomorrow?



A few months ago around 200 people were taking leave of this country for two years. Now they can be found working as teachers in developing countries throughout the world.

Will you be joining them this Autumn? If you do, you'll be helping a developing country to realise self-reliance through education; to gain access to vital medical, technical and commercial skills.

It's teaching at its most fundamental, often with a challenging lack of facilities. PRIMARY TEACHERS work as college based or in-service teacher trainers, or sometimes in secondary schools.

SECONDARY TEACHERS develop English language, maths, science and vocational subjects such as commerce, home economics.

EFL/ESP TEACHERS work with higher education students, many of whom will become teachers.
Most will be trained and experienced. All must be aged between 20 and 65, have no dependants and be willing to spend two years overseas on a local salary only.

For details of posts starting this Autumn contact:

Enquiries Unit, Voluntary Service Overseas, 9 Belgrave Square, London SW1X 8PW. (Please quote ref. TES 3/83 See appreciated.)



Education for development

OVERSEAS

SUDAN

The Sudanese Ministry of Education is seeking applications for the following posts: 1. English Teacher for 1983-84. 2. English Teacher for 1984-85. 3. English Teacher for 1985-86. 4. English Teacher for 1986-87. 5. English Teacher for 1987-88. 6. English Teacher for 1988-89. 7. English Teacher for 1989-90. 8. English Teacher for 1990-91. 9. English Teacher for 1991-92. 10. English Teacher for 1992-93. 11. English Teacher for 1993-94. 12. English Teacher for 1994-95. 13. English Teacher for 1995-96. 14. English Teacher for 1996-97. 15. English Teacher for 1997-98. 16. English Teacher for 1998-99. 17. English Teacher for 1999-00. 18. English Teacher for 2000-01. 19. English Teacher for 2001-02. 20. English Teacher for 2002-03. 21. English Teacher for 2003-04. 22. English Teacher for 2004-05. 23. English Teacher for 2005-06. 24. English Teacher for 2006-07. 25. English Teacher for 2007-08. 26. English Teacher for 2008-09. 27. English Teacher for 2009-10. 28. English Teacher for 2010-11. 29. English Teacher for 2011-12. 30. English Teacher for 2012-13. 31. English Teacher for 2013-14. 32. English Teacher for 2014-15. 33. English Teacher for 2015-16. 34. English Teacher for 2016-17. 35. English Teacher for 2017-18. 36. English Teacher for 2018-19. 37. English Teacher for 2019-20. 38. English Teacher for 2020-21. 39. English Teacher for 2021-22. 40. English Teacher for 2022-23. 41. English Teacher for 2023-24. 42. English Teacher for 2024-25. 43. English Teacher for 2025-26. 44. English Teacher for 2026-27. 45. English Teacher for 2027-28. 46. English Teacher for 2028-29. 47. English Teacher for 2029-30. 48. English Teacher for 2030-31. 49. English Teacher for 2031-32. 50. English Teacher for 2032-33. 51. English Teacher for 2033-34. 52. English Teacher for 2034-35. 53. English Teacher for 2035-36. 54. English Teacher for 2036-37. 55. English Teacher for 2037-38. 56. English Teacher for 2038-39. 57. English Teacher for 2039-40. 58. English Teacher for 2040-41. 59. English Teacher for 2041-42. 60. English Teacher for 2042-43. 61. English Teacher for 2043-44. 62. English Teacher for 2044-45. 63. English Teacher for 2045-46. 64. English Teacher for 2046-47. 65. English Teacher for 2047-48. 66. English Teacher for 2048-49. 67. English Teacher for 2049-50. 68. English Teacher for 2050-51. 69. English Teacher for 2051-52. 70. English Teacher for 2052-53. 71. English Teacher for 2053-54. 72. English Teacher for 2054-55. 73. English Teacher for 2055-56. 74. English Teacher for 2056-57. 75. English Teacher for 2057-58. 76. English Teacher for 2058-59. 77. English Teacher for 2059-60. 78. English Teacher for 2060-61. 79. English Teacher for 2061-62. 80. English Teacher for 2062-63. 81. English Teacher for 2063-64. 82. English Teacher for 2064-65. 83. English Teacher for 2065-66. 84. English Teacher for 2066-67. 85. English Teacher for 2067-68. 86. English Teacher for 2068-69. 87. English Teacher for 2069-70. 88. English Teacher for 2070-71. 89. English Teacher for 2071-72. 90. English Teacher for 2072-73. 91. English Teacher for 2073-74. 92. English Teacher for 2074-75. 93. English Teacher for 2075-76. 94. English Teacher for 2076-77. 95. English Teacher for 2077-78. 96. English Teacher for 2078-79. 97. English Teacher for 2079-80. 98. English Teacher for 2080-81. 99. English Teacher for 2081-82. 100. English Teacher for 2082-83. 101. English Teacher for 2083-84. 102. English Teacher for 2084-85. 103. English Teacher for 2085-86. 104. English Teacher for 2086-87. 105. English Teacher for 2087-88. 106. English Teacher for 2088-89. 107. English Teacher for 2089-90. 108. English Teacher for 2090-91. 109. English Teacher for 2091-92. 110. English Teacher for 2092-93. 111. English Teacher for 2093-94. 112. English Teacher for 2094-95. 113. English Teacher for 2095-96. 114. English Teacher for 2096-97. 115. English Teacher for 2097-98. 116. English Teacher for 2098-99. 117. English Teacher for 2099-00. 118. English Teacher for 2100-01. 119. English Teacher for 2101-02. 120. English Teacher for 2102-03. 121. English Teacher for 2103-04. 122. English Teacher for 2104-05. 123. English Teacher for 2105-06. 124. English Teacher for 2106-07. 125. English Teacher for 2107-08. 126. English Teacher for 2108-09. 127. English Teacher for 2109-10. 128. English Teacher for 2110-11. 129. English Teacher for 2111-12. 130. English Teacher for 2112-13. 131. English Teacher for 2113-14. 132. English Teacher for 2114-15. 133. English Teacher for 2115-16. 134. English Teacher for 2116-17. 135. English Teacher for 2117-18. 136. English Teacher for 2118-19. 137. English Teacher for 2119-20. 138. English Teacher for 2120-21. 139. English Teacher for 2121-22. 140. English Teacher for 2122-23. 141. English Teacher for 2123-24. 142. English Teacher for 2124-25. 143. English Teacher for 2125-26. 144. English Teacher for 2126-27. 145. English Teacher for 2127-28. 146. English Teacher for 2128-29. 147. English Teacher for 2129-30. 148. English Teacher for 2130-31. 149. English Teacher for 2131-32. 150. English Teacher for 2132-33. 151. English Teacher for 2133-34. 152. English Teacher for 2134-35. 153. English Teacher for 2135-36. 154. English Teacher for 2136-37. 155. English Teacher for 2137-38. 156. English Teacher for 2138-39. 157. English Teacher for 2139-40. 158. English Teacher for 2140-41. 159. English Teacher for 2141-42. 160. English Teacher for 2142-43. 161. English Teacher for 2143-44. 162. English Teacher for 2144-45. 163. English Teacher for 2145-46. 164. English Teacher for 2146-47. 165. English Teacher for 2147-48. 166. English Teacher for 2148-49. 167. English Teacher for 2149-50. 168. English Teacher for 2150-51. 169. English Teacher for 2151-52. 170. English Teacher for 2152-53. 171. English Teacher for 2153-54. 172. English Teacher for 2154-55. 173. English Teacher for 2155-56. 174. English Teacher for 2156-57. 175. English Teacher for 2157-58. 176. English Teacher for 2158-59. 177. English Teacher for 2159-60. 178. English Teacher for 2160-61. 179. English Teacher for 2161-62. 180. English Teacher for 2162-63. 181. English Teacher for 2163-64. 182. English Teacher for 2164-65. 183. English Teacher for 2165-66. 184. English Teacher for 2166-67. 185. English Teacher for 2167-68. 186. English Teacher for 2168-69. 187. English Teacher for 2169-70. 188. English Teacher for 2170-71. 189. English Teacher for 2171-72. 190. English Teacher for 2172-73. 191. English Teacher for 2173-74. 192. English Teacher for 2174-75. 193. English Teacher for 2175-76. 194. English Teacher for 2176-77. 195. English Teacher for 2177-78. 196. English Teacher for 2178-79. 197. English Teacher for 2179-80. 198. English Teacher for 2180-81. 199. English Teacher for 2181-82. 200. English Teacher for 2182-83. 201. English Teacher for 2183-84. 202. English Teacher for 2184-85. 203. English Teacher for 2185-86. 204. English Teacher for 2186-87. 205. English Teacher for 2187-88. 206. English Teacher for 2188-89. 207. English Teacher for 2189-90. 208. English Teacher for 2190-91. 209. English Teacher for 2191-92. 210. English Teacher for 2192-93. 211. English Teacher for 2193-94. 212. English Teacher for 2194-95. 213. English Teacher for 2195-96. 214. English Teacher for 2196-97. 215. English Teacher for 2197-98. 216. English Teacher for 2198-99. 217. English Teacher for 2199-00. 218. English Teacher for 2200-01. 219. English Teacher for 2201-02. 220. English Teacher for 2202-03. 221. English Teacher for 2203-04. 222. English Teacher for 2204-05. 223. English Teacher for 2205-06. 224. English Teacher for 2206-07. 225. English Teacher for 2207-08. 226. English Teacher for 2208-09. 227. English Teacher for 2209-10. 228. English Teacher for 2210-11. 229. English Teacher for 2211-12. 230. English Teacher for 2212-13. 231. English Teacher for 2213-14. 232. English Teacher for 2214-15. 233. English Teacher for 2215-16. 234. English Teacher for 2216-17. 235. English Teacher for 2217-18. 236. English Teacher for 2218-19. 237. English Teacher for 2219-20. 238. English Teacher for 2220-21. 239. English Teacher for 2221-22. 240. English Teacher for 2222-23. 241. English Teacher for 2223-24. 242. English Teacher for 2224-25. 243. English Teacher for 2225-26. 244. English Teacher for 2226-27. 245. English Teacher for 2227-28. 246. English Teacher for 2228-29. 247. English Teacher for 2229-30. 248. English Teacher for 2230-31. 249. English Teacher for 2231-32. 250. English Teacher for 2232-33. 251. English Teacher for 2233-34. 252. English Teacher for 2234-35. 253. English Teacher for 2235-36. 254. English Teacher for 2236-37. 255. English Teacher for 2237-38. 256. English Teacher for 2238-39. 257. English Teacher for 2239-40. 258. English Teacher for 2240-41. 259. English Teacher for 2241-42. 260. English Teacher for 2242-43. 261. English Teacher for 2243-44. 262. English Teacher for 2244-45. 263. English Teacher for 2245-46. 264. English Teacher for 2246-47. 265. English Teacher for 2247-48. 266. English Teacher for 2248-49. 267. English Teacher for 2249-50. 268. English Teacher for 2250-51. 269. English Teacher for 2251-52. 270. English Teacher for 2252-53. 271. English Teacher for 2253-54. 272. English Teacher for 2254-55. 273. English Teacher for 2255-56. 274. English Teacher for 2256-57. 275. English Teacher for 2257-58. 276. English Teacher for 2258-59. 277. English Teacher for 2259-60. 278. English Teacher for 2260-61. 279. English Teacher for 2261-62. 280. English Teacher for 2262-63. 281. English Teacher for 2263-64. 282. English Teacher for 2264-65. 283. English Teacher for 2265-66. 284. English Teacher for 2266-67. 285. English Teacher for 2267-68. 286. English Teacher for 2268-69. 287. English Teacher for 2269-70. 288. English Teacher for 2270-71. 289. English Teacher for 2271-72. 290. English Teacher for 2272-73. 291. English Teacher for 2273-74. 292. English Teacher for 2274-75. 293. English Teacher for 2275-76. 294. English Teacher for 2276-77. 295. English Teacher for 2277-78. 296. English Teacher for 2278-79. 297. English Teacher for 2279-80. 298. English Teacher for 2280-81. 299. English Teacher for 2281-82. 300. English Teacher for 2282-83. 301. English Teacher for 2283-84. 302. English Teacher for 2284-85. 303. English Teacher for 2285-86. 304. English Teacher for 2286-87. 305. English Teacher for 2287-88. 306. English Teacher for 2288-89. 307. English Teacher for 2289-90. 308. English Teacher for 2290-91. 309. English Teacher for 2291-92. 310. English Teacher for 2292-93. 311. English Teacher for 2293-94. 312. English Teacher for 2294-95. 313. English Teacher for 2295-96. 314. English Teacher for 2296-97. 315. English Teacher for 2297-98. 316. English Teacher for 2298-99. 317. English Teacher for 2299-00. 318. English Teacher for 2300-01. 319. English Teacher for 2301-02. 320. English Teacher for 2302-03. 321. English Teacher for 2303-04. 322. English Teacher for 2304-05. 323. English Teacher for 2305-06. 324. English Teacher for 2306-07. 325. English Teacher for 2307-08. 326. English Teacher for 2308-09. 327. English Teacher for 2309-10. 328. English Teacher for 2310-11. 329. English Teacher for 2311-12. 330. English Teacher for 2312-13. 331. English Teacher for 2313-14. 332. English Teacher for 2314-15. 333. English Teacher for 2315-16. 334. English Teacher for 2316-17. 335. English Teacher for 2317-18. 336. English Teacher for 2318-19. 337. English Teacher for 2319-20. 338. English Teacher for 2320-21. 339. English Teacher for 2321-22. 340. English Teacher for 2322-23. 341. English Teacher for 2323-24. 342. English Teacher for 2324-25. 343. English Teacher for 2325-26. 344. English Teacher for 2326-27. 345. English Teacher for 2327-28. 346. English Teacher for 2328-29. 347. English Teacher for 2329-30. 348. English Teacher for 2330-31. 349. English Teacher for 2331-32. 350. English Teacher for 2332-33. 351. English Teacher for 2333-34. 352. English Teacher for 2334-35. 353. English Teacher for 2335-36. 354. English Teacher for 2336-37. 355. English Teacher for 2337-38. 356. English Teacher for 2338-39. 357. English Teacher for 2339-40. 358. English Teacher for 2340-41. 359. English Teacher for 2341-42. 360. English Teacher for 2342-43. 361. English Teacher for 2343-44. 362. English Teacher for 2344-45. 363. English Teacher for 2345-46. 364. English Teacher for 2346-47. 365. English Teacher for 2347-48. 366. English Teacher for 2348-49. 367. English Teacher for 2349-50. 368. English Teacher for 2350-51. 369. English Teacher for 2351-52. 370. English Teacher for 2352-53. 371. English Teacher for 2353-54. 372. English Teacher for 2354-55. 373. English Teacher for 2355-56. 374. English Teacher for 2356-57. 375. English Teacher for 2357-58. 376. English Teacher for 2358-59. 377. English Teacher for 2359-60. 378. English Teacher for 2360-61. 379. English Teacher for 2361-62. 380. English Teacher for 2362-63. 381. English Teacher for 2363-64. 382. English Teacher for 2364-65. 383. English Teacher for 2365-66. 384. English Teacher for 2366-67. 385. English Teacher for 2367-68. 386. English Teacher for 2368-69. 387. English Teacher for 2369-70. 388. English Teacher for 2370-71. 389. English Teacher for 2371-72. 390. English Teacher for 2372-73. 391. English Teacher for 2373-74. 392. English Teacher for 2374-75. 393. English Teacher for 2375-76. 394. English Teacher for 2376-77. 395. English Teacher for 2377-78. 396. English Teacher for 2378-79. 397. English Teacher for 2379-80. 398. English Teacher for 2380-81. 399. English Teacher for 2381-82. 400. English Teacher for 2382-83. 401. English Teacher for 2383-84. 402. English Teacher for 2384-85. 403. English Teacher for 2385-86. 404. English Teacher for 2386-87. 405. English Teacher for 2387-88. 406. English Teacher for 2388-89. 407. English Teacher for 2389-90. 408. English Teacher for 2390-91. 409. English Teacher for 2391-92. 410. English Teacher for 2392-93. 411. English Teacher for 2393-94. 412. English Teacher for 2394-95. 413. English Teacher for 2395-96. 414. English Teacher for 2396-97. 415. English Teacher for 2397-98. 416. English Teacher for 2398-99. 417. English Teacher for 2399-00. 418. English Teacher for 2400-01. 419. English Teacher for 2401-02. 420. English Teacher for 2402-03. 421. English Teacher for 2403-04. 422. English Teacher for 2404-05. 423. English Teacher for 2405-06. 424. English Teacher for 2406-07. 425. English Teacher for 2407-08. 426. English Teacher for 2408-09. 427. English Teacher for 2409-10. 428. English Teacher for 2410-11. 429. English Teacher for 2411-12. 430. English Teacher for 2412-13. 431. English Teacher for 2413-14. 432. English Teacher for 2414-15. 433. English Teacher for 2415-16. 434. English Teacher for 2416-17. 435. English Teacher for 2417-18. 436. English Teacher for 2418-19. 437. English Teacher for 2419-20. 438. English Teacher for 2420-21. 439. English Teacher for 2421-22. 440. English Teacher for 2422-23. 441. English Teacher for 2423-24. 442. English Teacher for 2424-25. 443. English Teacher for 2425-26. 444. English Teacher for 2426-27. 445. English Teacher for 2427-28. 446. English Teacher for 2428-29. 447. English Teacher for 2429-30. 448. English Teacher for 2430-31. 449. English Teacher for 2431-32. 450. English Teacher for 2432-33. 451. English Teacher for 2433-34. 452. English Teacher for 2434

ADMINISTRATION

WEST SUSSEX
TRAINING CAREERS
OFFICER
Applicants should be graduates with a minimum of two years' experience in a relevant field. The successful applicant will be responsible for the recruitment and selection of staff for the County Council's various departments. Salary: £4,710 - £5,265 (training).
Further details and application form from: Mr. S. G. G. County Council, County Council Offices, County Hall, Chichester, PO19 1SP. Tel: 01243 77784. Closing date: 11th April 1983.

Child Care

LONDON SW18

HOUSEMISTRESS required in April for day school, plus and evening classes. Good salary and benefits. Good accommodation available. Salary according to experience & qualifications.
Write with full curriculum vitae and references to: Mrs. J. H. H. Woodhouse, Woodhouse Road, London SW18 0P. Tel: 01871 157121. 540000

Education Psychologists

ST. HELENS

EDUCATION COMMITTEE

TEMPORARY TRAINEE

PSYCHOLOGIST

Applications are invited for the post of Temporary Trainee Education Psychologist. The successful candidate will be responsible for the assessment and advice of pupils with special educational needs. Salary: £4,710 - £5,265 (training).
Further details and application form from: Mr. S. G. G. County Council, County Council Offices, County Hall, Chichester, PO19 1SP. Tel: 01243 77784. Closing date: 11th April 1983.

Librarians

DORSET

SOUTH DORSET

TECHNICAL COLLEGE

Weymouth DT4 0DX

LIBRARIAN - TUTOR

Applicants are invited

for the above post which

becomes vacant on 01st

July 1983.

No experience necessary

How much will you earn?

It's up to you. Last year over 150

of our Sales Associates earned

in excess of £15,000. And many

others had experience selling

experience. For more important

than age, sex and background,

and enthusiasm, drive and

enthusiasm. If you think you

could succeed as a

Sales Associate and live

in North Devon, Surrey,

N.W. Kent or South London

ring 08-543 8767 for no

appointment.

Hambro Life

Britain's largest unit-linked insurance company

These appointments are open to both men and women.

Miscellaneous

CAMBRIDGE

AUDIO-VISUAL

TECHNICAL

DEVELOPMENT OF A/V

EQUIPMENT

Interest in video production

Apply to: Mr. J. H. H.

Woodhouse, Woodhouse

Road, London SW18

0P. Tel: 01871 157121.

540000

DORSET

DORSET INDUSTRIAL

MUSIC SERVICE

Applications are invited

from qualified teachers

to teach Music in

primary and secondary

schools. Salary: £4,710 -

£5,265 (training).
Further details and application form from: Mr. S. G. G. County Council, County Council Offices, County Hall, Chichester, PO19 1SP. Tel: 01243 77784. Closing date: 11th April 1983.

LONDON

ACADEMIC PRESS

requires a

Production Supervisor to

take charge of a small unit

of technical staff. The

successful candidate will

be responsible for the

production of books and

journals. Salary: £4,710 -

£5,265 (training).
Further details and application form from: Mr. S. G. G. County Council, County Council Offices, County Hall, Chichester, PO19 1SP. Tel: 01243 77784. Closing date: 11th April 1983.

HOME TUTOR, spare time

required, North London

area. Tel: 01-525 7030.

620000

157121

540000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

Miscellaneous

CAMBRIDGE

AUDIO-VISUAL

TECHNICAL

DEVELOPMENT OF A/V

EQUIPMENT

Interest in video production

Apply to: Mr. J. H. H.

Woodhouse, Woodhouse

Road, London SW18

0P. Tel: 01871 157121.

540000

DORSET

DORSET INDUSTRIAL

MUSIC SERVICE

Applications are invited

from qualified teachers

to teach Music in

primary and secondary

schools. Salary: £4,710 -

£5,265 (training).
Further details and application form from: Mr. S. G. G. County Council, County Council Offices, County Hall, Chichester, PO19 1SP. Tel: 01243 77784. Closing date: 11th April 1983.

LONDON

ACADEMIC PRESS

requires a

Production Supervisor to

take charge of a small unit

of technical staff. The

successful candidate will

be responsible for the

production of books and

journals. Salary: £4,710 -

£5,265 (training).
Further details and application form from: Mr. S. G. G. County Council, County Council Offices, County Hall, Chichester, PO19 1SP. Tel: 01243 77784. Closing date: 11th April 1983.

HOME TUTOR, spare time

required, North London

area. Tel: 01-525 7030.

620000

157121

540000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

620000

SOVA

Literacy/MINERACY

COURSES

£11.00 per hour - 8 hours

per week

NOVA

A/V Unit

of

Literacy/MINERACY

Courses

£11.00 per hour - 8 hours

per week

NOVA

A/V Unit

of

Literacy/MINERACY

Courses

£11.00 per hour - 8 hours

per week

NOVA

A/V Unit

of

Literacy/MINERACY

Courses

£11.00 per hour - 8 hours

per week

NOVA

A/V Unit

of

Literacy/MINERACY

Courses

£11.00 per hour - 8 hours

per week

NOVA

A/V Unit

of

Literacy/MINERACY

Courses

£11.00 per hour - 8 hours

per week

NOVA

A/V Unit

of

Literacy/MINERACY

Courses

£11.00 per hour - 8 hours

per week

NOVA

A/V Unit

of

Literacy/MINERACY

Courses

£11.00 per hour - 8 hours

per week

NOVA

A/V Unit

of

Literacy/MINERACY

Courses

£11.00 per hour - 8 hours

per week

NOVA

A/V Unit

of

Literacy/MINERACY

Outdoor Education

DEVON

SKERN LODGE OUTDOOR

CENTRE

Chirk

against

the

value

of

the

value

of

the

value

of

the

value

of

the

value

of

the

value

of

the

value

of

the

value

of

the

value

of

the

value

of

the

value

of

the

value

of

the

value

of

the

value

of

the

value

of

the

value

of

the

value

of

the

value

of

the

value

of

the

THE TIMES EDUCATIONAL SUPPLEMENT 18.3.83

OUTDOOR EDUCATION

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

DEVON

